State Water Resources Control Board
Division of Drinking Water

June 4, 2018

System No. 3601048

Gabe Valencia
Board Member
Barton Flats Water System
P.O. Box 181
Angelus Oaks, CA 92305
gabe@milehighpines.com

CITATION NO. 05-13-18C-013
SURFACE WATER TREATMENT TECHNIQUE VIOLATION –TURBIDITY EXCEEDANCE FOR MARCH, MAY, JUNE, AND JULY 2017

Enclosed is Citation No. 05-13-18C-013 (hereinafter "Citation"), issued to the Barton Flats (hereinafter "Water System"), public water system. Please note that there are legally enforceable deadlines associated with this Citation.

The Water System will be billed at the State Water Resources Control Board's (hereinafter "State Water Board"), hourly rate for the time spent on issuing this Citation. California Health and Safety Code (hereinafter "CHSC"), Section 116577, provides that a public water system must reimburse the State Water Board for actual costs incurred by the State Water Board for specified enforcement actions, including but not limited to, preparing, issuing and monitoring compliance with a citation. At this time, the State Water Board has spent approximately 0.5 hours on enforcement activities associated with this violation.

The Water System will receive a bill sent from the State Water Board in August of the next fiscal year. This bill will contain fees for any enforcement time spent on the Water System for the current fiscal year.

Any person who is aggrieved by a citation, order or decision issued under authority delegated to an officer or employee of the state board under Article 8 (commencing with CHSC, Section 116625) or Article 9 (commencing with CHSC, Section 116650), of the Safe Drinking Water Act (CHSC, Division 104, Part 12, Chapter 4), may file a petition with the State Water Board for reconsideration of the citation, order or decision. Appendix 1 to the enclosed Citation contains the relevant statutory provisions for filing a petition for reconsideration (CHSC, Section 116701).

Petitions must be received by the State Water Board within 30 days of the issuance of the citation, order or decision by the Deputy Director. The date of issuance is the date when the Division of Drinking Water mails a copy of the citation, order or decision. If the 30th day falls on a Saturday, Sunday, or state holiday, the petition is due the following business day by 5:00 p.m.

Information regarding filing petitions may be found at:

http://www.waterboards.ca.gov/drinking_water/programs/petitions/index.shtml

If you have any questions regarding this matter, please contact Andrés Aguirre of my staff at (909) 383-4308 or me at (909) 383-4328.

Sincerely,

Eric J. Zúñiga, P.E.
District Engineer
San Bernardino District
Southern California Field Operations Branch

Enclosures

Certified Mail No. 7006 2150 0004 3940 8546

cc: Lee Fulmer, Barton Flats Water System via leefulmer@rocketmail.com
Diana Almond, San Bernardino County EHS via Diana.Almond@dph.sbcounty.gov
Joy Chakma, San Bernardino County EHS via Joy.Chakma@dph.sbcounty.gov

Citation No. 05-13-18C-013

STATE OF CALIFORNIA

STATE WATER RESOURCES CONTROL BOARD

DIVISION OF DRINKING WATER

Name of Public Water System: Barton Flats Water System

Water System No: 3601048

Attention: Gabe Valencia
Board Member
Barton Flats Water System
P.O. Box 181
Angelus Oaks, CA 92305

Issued: June 4, 2018

CITATION FOR NONCOMPLIANCE WITH
CALIFORNIA HEALTH AND SAFETY CODE, SECTION 116555(a)(1) AND
TITLE 22, CALIFORNIA CODE OF REGULATIONS, SECTION 64653(e)(2)

SURFACE WATER TREATMENT TECHNIQUE VIOLATION
TURBIDITY PERFORMANCE STANDARD EXCEEDANCE
MARCH, MAY, JUNE, AND JULY 2017

The California Health and Safety Code (hereinafter "CHSC"), Section 116650 authorizes the State Water Resources Control Board (hereinafter "State Water Board"), to issue a citation to a public water system when the State Water Board

determines that the public water system has violated or is violating the California Safe Drinking Water Act (hereinafter "California SDWA"), (CHSC, Division 104, Part 12, Chapter 4, commencing with Section 116270), or any regulation, standard, permit, or order issued or adopted thereunder.

The State Water Board, acting by and through its Division of Drinking Water (hereinafter "Division"), and the Deputy Director for the Division, hereby issues this citation pursuant to Section 116650 of the CHSC to the Barton Flats Water System (hereinafter "Water System"), for violation of Section 116555(a)(1) and Title 22, California Code of Regulations (CCR), Section 64653 (e)(2).

A copy of the applicable statutes and regulations are included in Appendix 1, which is attached hereto and incorporated by reference.

STATEMENT OF FACTS

The Water System is classified as a transient noncommunity public water system serving 8 U.S. Forest Service (USFS) campgrounds and concessionaire and 6 Barton Flats Water Committee member facilities. The 9 organized camps could have a potential transient population of 2,250 campers and staff (250 x 9) at any one time during the camping season (2005 San Bernardino County Inspection Report). The Water System currently does not have a Domestic Water Supply Permit issued by the State Water Board since regulatory jurisdiction was transferred July 1, 2016.

CHSC, Section 116555(a)(1) requires all public water systems to comply with primary drinking water standards as defined in CHSC, Section 116275(c). Primary drinking water standards include maximum levels of contaminants and the monitoring and reporting requirements as specified in regulations adopted by the State Water Board that pertain to maximum contaminant levels.

Title 22, CCR, Section 64653 specifies filtration treatment technique requirements for use of surface water. Filtration techniques other than conventional filtration, direct filtration, diatomaceous earth filtrtaion, or slow sand filtration are alternative filtration technologies and Section 64653 (e)-(h) apply.

Subsection (e)(1) requires that alternative filtration technologies meet turbidity performance standards established by the State Board determined from a filtration technology demonstration and be no less stringent then turbidity performance standards established in subsection (c)(1) for conventional or direct filtration. The establishment of monitoring and performance standards shall be per the permitting process as noted in subsection (h).

The Water System uses Rosedale GLR-PO-825-2 and PS-520-PPP-241 bag and cartridge filters for surface water filtration and are considered an alternative filtration technology. A filtration technology demonstration was completed for Rosedale bag filters (Attachment 2) and they have the following performance requirments for the filtered water:

1. Shall be equal to or less than 0.2 NTU in 95 percent of the measurements taken each month.

2. Shall not exceed 1.0 NTU at any time.

3. When using a grab sampling monitoring program shall not exceed 0.5 NTU in more than two samples taken consecutively while the plant is in operation.

A water supply permit has not been issued to the Water System. Requirements can be no less stringent than Title 22, CCR, Section 64653(c)(1). The requirements from the filtration technology demonstration are more stringent than Section 64653 (c)(1) and would apply for permitting.

The March 2017 monthly report (Attachement 3) shows 29 turbidity samples were collected of which 3 had nephelometic turbidity units (NTU) greater than 0.2 NTU (0.25 NTU and higher) or 10.3 percent of samples. The percent of samples with turbidity less than 0.2 NTU was 89.7 percent.

The May 2017 monthly report (Attachement 3) shows 30 turbidity samples were collected of which 6 had turbidity greater than 0.2 NTU (0.25 NTU and higher) or 20 percent of samples. The percent of samples with turbidity less than 0.2 NTU was 80 percent.

The June 2017 monthly report (Attachement 3) shows 28 turbidity samples were collected of which 15 had turbidity greater than 0.2 NTU (0.25 NTU and higher) or 53.6 percent of samples. The percent of samples with turbidity less than 0.2 NTU was 46.4 percent.

The July 2017 monthly report (Attachement 3) shows 30 turbidity samples were collected of which 20 had turbidity greater than 0.2 NTU (0.25 NTU and higher) or 66.6 percent of samples. The percent of samples with turbidity less than 0.2 NTU was 33.4 percent.

DETERMINATION

The Water System exceeded 0.2 NTU in 5 percent of the measurements taken March, May, June and July 2017 in violation of Title 22, CCR, Section 64653 (e)(2).

DIRECTIVES

The Water System is hereby directed to take the following actions:

1. Cease and desist from providing water that does not meet turbidity standards.

2. On or before **May 30, 2018**, notify all persons served of the violation of Section 64653 (e)(2), in conformance with CCR, Title 22, Sections 64463.4(b)&(c) and 64465. Copies of Sections 64463.4 and 64465 are included in Appendix 1. Appendix 4: Notification Template shall be used to fulfill this directive, unless otherwise approved by the Division.

3. The notice in directive 1 shall be posted no less than seven (7) in a conspicuous public and one additional method as noted in the template in Appendix 4. An electronic copy of the template is available at the following link:

https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Notices.html

4. Complete Appendix 5: Compliance Certification Form. Submit it together with a copy of the public notification to the Division on or before **June 10, 2018**.

5. Monthly reports for the treatment plant shall be submitted by the 10th of the following month.

6. Adjustments shall be made to the Barton Flats Water Treatment Plant to provide alarm and/or shutdown or filter-to-waste if turbidity standards are not met. The changes shall be included in the operations plan due by **August 6, 2018.**

All submittals required by this Citation shall be electronically submitted to the State Water Board at the following address. The subject line for all electronic submittals corresponding to this Citation shall include the following information: Water System name and number, citation number and title of the document being submitted.

Eric J. Zúñiga, PE
District Engineer
San Bernardino District
Dwpdist13@waterboards.ca.gov

The State Water Board reserves the right to make such modifications to this Citation as it may deem necessary to protect public health and safety. Such modifications may be issued as amendments to this Citation and shall be effective upon issuance.

Nothing in this Citation relieves the Water System of its obligation to meet the requirements of the California SDWA (CHSC, Division 104, Part 12, Chapter 4, commencing with Section 116270), or any regulation, standard, permit or order issued or adopted thereunder.

PARTIES BOUND

This Citation shall apply to and be binding upon the Water System, its owners, shareholders, officers, directors, agents, employees, contractors, successors, and assignees.

SEVERABILITY

The directives of this Citation are severable, and the Water System shall comply with each and every provision thereof notwithstanding the effectiveness of any provision.

FURTHER ENFORCEMENT ACTION

The California SDWA authorizes the State Water Board to: issue a citation or order with assessment of administrative penalties to a public water system for violation or continued violation of the requirements of the California SDWA or any regulation, permit, standard, citation, or order issued or adopted thereunder including, but not limited to, failure to correct a violation identified in a citation or compliance order.

The California SDWA also authorizes the State Water Board to take action to suspend or revoke a permit that has been issued to a public water system if the public water system has violated applicable law or regulations or has failed to comply with an order of the State Water Board, and to petition the superior court to take various enforcement measures against a public water system that has failed to comply with an order of the State Water Board. The State Water Board does not waive any further enforcement action by issuance of this Citation.

Eric J. Zúñiga, PE

District Engineer

San Bernardino District

Southern California Field Operations Branch

6/4/18

Date

Appendices (5):

1. Applicable Statutes and Regulations
2. Rosedale filtration technology demonstration documentation
3. Barton Flats March, May, June, and July 2017 Monthly Reports
4. Tier 2 SWTR Turbidity Exceedance Notice Template
5. Compliance Certification Form

Certified Mail No. 7006 2150 0004 3940 8546

APPENDIX 1. APPLICABLE STATUTES AND REGULATIONS FOR CITATION NO. 05-13-18C-013 TURBIDITY PERFORMANCE STANDARD EXCEEDANCE

NOTE: The following language is provided for the convenience of the recipient, and cannot be relied upon as the State of California's representation of the law. The published codes are the only official representation of the law. Regulations related to drinking water are in Titles 22 and 17 of the California Code of Regulations. Statutes related to drinking water are in the Health & Safety Code, the Water Code, and other codes.

California Health and Safety Code (CHSC):

Section 116271 states in relevant part:

(a) The State Water Resources Control Board succeeds to and is vested with all of the authority, duties, powers, purposes, functions, responsibilities, and jurisdiction of the State Department of Public Health, its predecessors, and its director for purposes of all of the following:

(1) The Environmental Laboratory Accreditation Act (Article 3 (commencing with Section 100825) of Chapter 4 of Part 1 of Division 101).

(2) Article 3 (commencing with Section 106875) of Chapter 4 of Part 1.

(3) Article 1 (commencing with Section 115825) of Chapter 5 of Part 10.

(4) This chapter and the Safe Drinking Water State Revolving Fund Law of 1997 (Chapter 4.5 (commencing with Section 116760)).

(5) Article 2 (commencing with Section 116800), Article 3 (commencing with Section 116825), and Article 4 (commencing with Section 116875) of Chapter 5.

(6) Chapter 7 (commencing with Section 116975).

(7) The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Division 43 (commencing with Section 75001) of the Public Resources Code).

(8) The Water Recycling Law (Chapter 7 (commencing with Section 13500) of Division 7 of the Water Code).

(9) Chapter 7.3 (commencing with Section 13560) of Division 7 of the Water Code.

(10) The California Safe Drinking Water Bond Law of 1976 (Chapter 10.5 (commencing with Section 13850) of Division 7 of the Water Code).

(11) Wholesale Regional Water System Security and Reliability Act (Division 20.5 (commencing with Section 73500) of the Water Code).

(12) Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002 (Division 26.5 (commencing with Section 79500) of the Water Code).

(b) The State Water Resources Control Board shall maintain a drinking water program and carry out the duties, responsibilities, and functions described in this section. Statutory reference to "department," "state department," or "director" regarding a function transferred to the State Water Resources Control Board shall refer to the State Water Resources Control Board. This section does not impair the authority of a local health officer to enforce this chapter or a county's election not to enforce this chapter, as provided in Section 116500...

(k) (1) The State Water Resources Control Board shall appoint a deputy director who reports to the executive director to oversee the issuance and enforcement of public water system permits and other duties as appropriate. The deputy director shall have public health expertise.

(2) The deputy director is delegated the State Water Resources Control Board's authority to provide notice, approve notice content, approve emergency notification plans, and take other action pursuant to Article 5 (commencing with Section 116450), to issue, renew, reissue, revise, amend, or deny any public water system permits pursuant to Article 7 (commencing with Section 116525), to suspend or revoke any public water system permit pursuant to Article 8 (commencing with Section 116625), and to issue citations, assess penalties, or issue orders pursuant to Article 9 (commencing with Section 116650). Decisions and actions of the deputy director taken pursuant to Article 5 (commencing with Section 116450) or Article 7 (commencing with Section 116525) are deemed decisions and actions taken, but are not subject to reconsideration, by the State Water Resources Control Board. Decisions and actions of the deputy director taken pursuant to Article 8 (commencing with Section 116625) and Article 9 (commencing with Section 116650) are deemed decisions and actions taken by the State Water Resources Control Board, but any aggrieved person may petition the State Water Resources Control Board for reconsideration of the decision or action. This subdivision is not a limitation on the State Water Resources Control Board's authority to delegate any other powers and duties.

Section 116275 states in relevant part:

(c) "Primary drinking water standards" means:

(1) Maximum levels of contaminants that, in the judgment of the state board, may have an adverse effect on the health of persons.

(2) Specific treatment techniques adopted by the state board in lieu of maximum contaminant levels pursuant to subdivision (j) of Section 116365.

Section 116555 states in relevant part:
(a) Any person who owns a public water system shall ensure that the system does all of the following:
(1) Complies with primary and secondary drinking water standards.
(2) Will not be subject to backflow under normal operating conditions.
(3) Provides a reliable and adequate supply of pure, wholesome, healthful, and potable water.

Section 116577. Enforcement fee states:
(a) Each public water system shall reimburse the state board for actual costs incurred by the state board for any of the following enforcement activities related to that water system:
(1) Preparing, issuing, and monitoring compliance with, an order or a citation.
(2) Preparing and issuing public notification.
(3) Conducting a hearing pursuant to Section 116625. *NOTE: This publication includes a variety of* (b) The state board shall submit an invoice for these enforcement costs to the public water system that requires payment before September 1 of the fiscal year following the fiscal year in which the costs were incurred. The invoice shall indicate the total hours expended, the reasons for the expenditure, and the hourly cost rate of the state board. The costs set forth in the invoice shall not exceed the total actual costs to the state board of enforcement activities specified in this section.
(c) Notwithstanding the reimbursement of enforcement costs of the local primacy agency pursuant to subdivision (a) of Section 116595 by a public water system under the jurisdiction of the local primacy agency, a public water system shall also reimburse enforcement costs, if any, incurred by the state board pursuant to this section.
(d) "Enforcement costs," as used in this section, does not include "litigation costs" pursuant to Section 116585.
(e) The state board shall not be entitled to enforcement costs pursuant to this section if a court determines that enforcement activities were in error.
(f) Payment of the invoice shall be made within 90 days of the date of the invoice. Failure to pay the invoice within 90 days shall result in a 10-percent late penalty that shall be paid in addition to the invoiced amount.
(g) The state board may, at its sole discretion, waive payment by a public water system of all or any part of the invoice or penalty.

Section 116625 (Revocation and suspension of permits) states:
(a) The department, after a hearing noticed and conducted as provided in Section 100171, may suspend or revoke any permit issued pursuant to this chapter if the department determines pursuant to the hearing that the permittee is not complying with the permit, this chapter, or any regulation, standard, or order issued or adopted thereunder, or that the permittee has made a false statement or representation on any application, record, or report maintained or submitted for purposes of compliance with this chapter. If the permit at issue has been temporarily suspended pursuant to subdivision (c), the accusation shall be served and notice of the hearing date given within 15 days of the effective date of the temporary suspension order. The commencement of the hearing shall be as soon as practicable, but in no case later than 60 days after the effective date of the temporary suspension order.
(b) The permittee may file with the superior court a petition for a writ of mandate for review of any decision of the department made pursuant to subdivision (a). Failure to file a petition shall not preclude a party from challenging the reasonableness or validity of a decision of the department in any judicial proceeding to enforce the decision or from pursuing any remedy authorized by this chapter.
(c) The department may temporarily suspend any permit issued pursuant to this chapter prior to any hearing when the action is necessary to prevent an imminent or substantial danger to health. The director shall notify the permittee of the temporary suspension and the effective date thereof and, at the same time, notify the permittee that a hearing has been scheduled. The hearing shall be held as soon as possible, but not later than 15 days after the effective date of the temporary suspension and shall deal only with the issue of whether the temporary suspension shall remain in place pending a hearing on the merits. The temporary suspension shall remain in effect until the hearing is completed and the director has made a final determination on the temporary suspension, that in any event shall be made within 15 days after the completion of the hearing. If the determination is not transmitted within 15 days after the hearing is completed, the temporary suspension shall be of no further effect. Dissolution of the temporary suspension does not deprive the department of jurisdiction to proceed with a hearing on the merits under subdivision (a).

Section 116650 states in relevant part:
(a) If the state board determines that a public water system is in violation of this chapter or any regulation, permit, standard, citation, or order issued or adopted thereunder, the state board may issue a citation to the public water system. The citation shall be served upon the public water system personally or by certified mail. Service shall be deemed effective as of the date of personal service or the date of receipt of the certified mail. If a person to whom a citation is directed refuses to accept delivery of the certified mail, the date of service shall be deemed to be the date of mailing.
(b) Each citation shall be in writing and shall describe the nature of the violation or violations, including a reference to the statutory provision, standard, order, citation, permit, or regulation alleged to have been violated.
(c) A citation may specify a date for elimination or correction of the condition constituting the violation.
(d) A citation may include the assessment of a penalty as specified in subdivision (e).

(e) The state board may assess a penalty in an amount not to exceed one thousand dollars ($1,000) per day for each day that a violation occurred, and for each day that a violation continues to occur. A separate penalty may be assessed for each violation and shall be in addition to any liability or penalty imposed under any other law.

Section 116701 (Petitions to Orders and Decisions) states:

(a) Within 30 days of issuance of an order or decision issued by the deputy director under Article 8 (commencing with Section 116625) or Article 9 (commencing with Section 116650), an aggrieved person may petition the state board for reconsideration. Where the order or decision of the deputy director is issued after a hearing under Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code, this section shall apply instead of Section 11521 of the Government Code.

(b) The petition shall include the name and address of the petitioner, a copy of the order or decision for which the petitioner seeks reconsideration, identification of the reason the petitioner alleges the issuance of the order was inappropriate or improper, the specific action the petitioner requests, and other information as the state board may prescribe. The petition shall be accompanied by a statement of points and authorities of the legal issues raised by the petition.

(c) The evidence before the state board shall consist of the record before the deputy director and any other relevant evidence that, in the judgment of the state board, should be considered to implement the policies of this chapter. The state board may, in its discretion, hold a hearing for receipt of additional evidence.

(d) The state board may refuse to reconsider the order or decision if the petition fails to raise substantial issues that are appropriate for review, may deny the petition upon a determination that the issuance of the order or decision was appropriate and proper, may set aside or modify the order or decision, or take other appropriate action. The state board's action pursuant to this subdivision shall constitute the state board's completion of its reconsideration.

(e) The state board, upon notice and hearing, if a hearing is held, may stay in whole or in part the effect of the order or decision of the deputy director.

(f) If an order of the deputy director is subject to reconsideration under this section, the filing of a petition for reconsideration is an administrative remedy that must be exhausted before filing a petition for writ of mandate under Section 116625 or 116700.

California Code of Regulations (CCR), Title 22:

Section 64463.1 (Tier 1 Public Notice) states in relevant part:

(a) A water system shall give public notice pursuant to this section and section 64465 if any of the following occurs:

(1) Violation of the total coliform MCL when:

(A) Fecal coliform or E. coli are present in the distribution system; or

(B) When any repeat sample tests positive for coliform and the water system fails to test for fecal coliforms or E. coli in the repeat sample;...

(b) As soon as possible within 24 hours after learning of any of the violations in subsection (a) or being notified by the State Board that it has determined there is a potential for adverse effects on human health [pursuant to paragraph (a)(4), (5), or (6)], the water system shall:

(1) Give public notice pursuant to this section;

(2) Initiate consultation with the State Board within the same timeframe; and

(3) Comply with any additional public notice requirements that are determined by the consultation to be necessary to protect public health.

(c) A water system shall deliver the public notice in a manner designed to reach residential, transient, and nontransient users of the water system and shall use, as a minimum, one of the following forms:

(1) Radio or television;

(2) Posting in conspicuous locations throughout the area served by the water system;

(3) Hand delivery to persons served by the water system; or

(4) Other method approved by the State Board, based on the method's ability to inform water system users.

Section 64463.4 (Tier 2 Public Notice) states:

(a) A water system shall give public notice pursuant to this section if any of the following occurs:

(1) Any violation of the MCL, MRDL, and treatment technique requirements, except:

(A) Where a Tier 1 public notice is required under section 64463.1; or

(B) Where the State Board determines that a Tier 1 public notice is required, based on potential health impacts and persistence of the violations;

(2) All violations of the monitoring and testing procedure requirements in sections 64421 through 64426.1, article 3 (Primary Standards – Bacteriological Quality), for which the State Board determines that a Tier 2 rather than a Tier 3 public notice is required, based on potential health impacts and persistence of the violations;

(3) Other violations of the monitoring and testing procedure requirements in this chapter, and chapters 15.5, 17 and 17.5, for which the State Board determines that a Tier 2 rather than a Tier 3 public notice is required, based on potential health impacts and persistence of the violations; or
(4) Failure to comply with the terms and conditions of any variance or exemption in place.

(b) A water system shall give the notice as soon as possible within 30 days after it learns of a violation or occurrence specified in subsection (a), except that the water system may request an extension of up to 60 days for providing the notice. This extension would be subject to the State Board's written approval based on the violation or occurrence having been resolved and the State Board's determination that public health and welfare would in no way be adversely affected. In addition, the water system shall:
(1) Maintain posted notices in place for as long as the violation or occurrence continues, but in no case less than seven days;
(2) Repeat the notice every three months as long as the violation or occurrence continues. Subject to the State Board's written approval based on its determination that public health would in no way be adversely affected, the water system may be allowed to notice less frequently but in no case less than once per year. No allowance for reduced frequency of notice shall be given in the case of a total coliform MCL violation or violation of a Chapter 17 treatment technique requirement; and
(3) For turbidity violations pursuant to sections 64652.5(c)(2) and 64653(c), (d) and (f), as applicable, a water system shall consult with the State Board as soon as possible within 24 hours after the water system learns of the violation to determine whether a Tier 1 public notice is required. If consultation does not take place within 24 hours, the water system shall give Tier 1 public notice within 48 hours after learning of the violation.

(c) A water system shall deliver the notice, in a manner designed to reach persons served, within the required time period as follows:
(1) Unless otherwise directed by the State Board in writing based on its assessment of the violation or occurrence and the potential for adverse effects on public health and welfare, community water systems shall give public notice by;
(A) Mail or direct delivery to each customer receiving a bill including those that provide their drinking water to others (e.g., schools or school systems, apartment building owners, or large private employers), and other service connections to which water is delivered by the water system; and
(B) Use of one or more of the following methods to reach persons not likely to be reached by a mailing or direct delivery (renters, university students, nursing home patients, prison inmates, etc.):
1. Publication in a local newspaper;
2. Posting in conspicuous public places served by the water system, or on the Internet; or
3. Delivery to community organizations.
(2) Unless otherwise directed by the State Board in writing based on its assessment of the violation or occurrence and the potential for adverse effects on public health and welfare, noncommunity water systems shall give the public notice by:
(A) Posting in conspicuous locations throughout the area served by the water system; and
(B) Using one or more of the following methods to reach persons not likely to be reached by a public posting:
1. Publication in a local newspaper or newsletter distributed to customers;
2. E-mail message to employees or students;
3. Posting on the Internet or intranet; or
4. Direct delivery to each customer.

Section 64465 (Public Notice Content and Format) states in relevant part:
(a) Each public notice given pursuant to this article, except Tier 3 public notices for variances and exemptions pursuant to subsection (b), shall contain the following:
(1) A description of the violation or occurrence, including the contaminant(s) of concern, and (as applicable) the contaminant level(s);
(2) The date(s) of the violation or occurrence;
(3) Any potential adverse health effects from the violation or occurrence, including the appropriate standard health effects language from appendices 64465-A through G;
(4) The population at risk, including subpopulations particularly vulnerable if exposed to the contaminant in drinking water;
(5) Whether alternative water supplies should be used;
(6) What actions consumers should take, including when they should seek medical help, if known;
(7) What the water system is doing to correct the violation or occurrence;
(8) When the water system expects to return to compliance or resolve the occurrence;

(9) The name, business address, and phone number of the water system owner, operator, or designee of the water system as a source of additional information concerning the public notice;
(10) A statement to encourage the public notice recipient to distribute the public notice to other persons served, using the following standard language: —Please share this information with all the other people who drink this water, especially those who may not have received this public notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this public notice in a public place or distributing copies by hand or mail; and
(11) For a water system with a monitoring and testing procedure violation, this language shall be included: "We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During [compliance period dates], we ['did not monitor or test' or 'did not complete all monitoring or testing'] for [contaminant(s)], and therefore, cannot be sure of the quality of your drinking water during that time." ...

(c) A public water system providing notice pursuant to this article shall comply with the following multilingual-related requirements:

(2) For a Tier 2 or Tier 3 public notice:

(A) The notice shall contain information in Spanish regarding the importance of the notice, or contain a telephone number or address where Spanish-speaking residents may contact the public water system to obtain a translated copy of the notice or assistance in Spanish; and
(B) When a non-English speaking group other than Spanish-speaking exceeds 1,000 residents or 10 percent of the residents served by the public water system, the notice shall include:

1. Information in the appropriate language(s) regarding the importance of the notice; or
2. A telephone number or address where such residents may contact the public water system to obtain a translated copy of the notice or assistance in the appropriate language; and

(3) For a public water system subject to the Dymally-Alatorre Bilingual Services Act, Chapter 17.5, Division 7, of the Government Code (commencing with section 7290), meeting the requirements of this Article may not ensure compliance with the Dymally-Alatorre Bilingual Services Act.

(d) Each public notice given pursuant to this article shall:

(1) Be displayed such that it catches people's attention when printed or posted and be formatted in such a way that the message in the public notice can be understood at the eighth-grade level;
(2) Not contain technical language beyond an eighth-grade level or print smaller than 12 point; and
(3) Not contain language that minimizes or contradicts the information being given in the public notice.

Appendix 64465-A. Health Effects Language - Microbiological Contaminants.

Contaminant	Health Effects Language
Total Coliform	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
Fecal coliform/E. coli	Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
Turbidity	Turbidity has no health effects. However, high levels of turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Section 64469 (Reporting Requirements) states in relevant part:

(d) Within 10 days of giving initial or repeat public notice pursuant to Article 18 of this Chapter, except for notice given under section 64463.7(d), each water system shall submit a certification to the State Board that it has done so, along with a representative copy of each type of public notice given.

Section 64481 (Content of the Consumer Confidence Report) states in relevant part:

(g) For the year covered by the report, the Consumer Confidence Report shall note any violations of paragraphs (1) through (7) and give related information, including any potential adverse health effects, and the steps the system has taken to correct the violation.

(1) Monitoring and reporting of compliance data.

Section 64653. Filtration states:

(a) All approved surface water utilized by a supplier shall be treated using one of the following filtration technologies unless an alternative process has been approved by the State Board pursuant to subsections (e), (f), (g), and (h):

(1) Conventional filtration treatment;
(2) Direct filtration treatment;
(3) Diatomaceous earth filtration; or
(4) Slow sand filtration.

(b) Conventional filtration treatment shall be deemed to be capable of achieving at least 99.7 percent removal of *Giardia lamblia* cysts, 99 percent removal of viruses, and 99 percent removal of *Cryptosporidium* when in compliance with operating criteria specified in section 64660 and performance standards specified in table 64653. Direct filtration treatment, diatomaceous earth filtration, and slow sand filtration shall be deemed to be capable of achieving at least 99 percent removal of *Giardia lamblia* cysts, 90 percent removal of viruses, and 99 percent removal of *Cryptosporidium* when in compliance with operating criteria specified in section 64660 and performance standards specified in table 64653.

(c) A supplier shall comply with the combined filter effluent turbidity performance standards in table 64653 for each treatment plant while the plant is in operation:

Table 64653

Combined Filter Effluent Turbidity Performance Standards[a]

If a supplier uses...	***The turbidity level of the combined filter effluent...***
(1) Conventional or direct filtration treatment and serves 10,000 or more persons	(A) Shall be less than or equal to 0.3 NTU in at least 95 percent of the measurements taken each month;
	(B) Shall not exceed 1 NTU for more than one continuous hour;
	(C) Shall not exceed 1 NTU at four-hour intervals; and
	(D) Shall not exceed 1.0 NTU for more than eight consecutive hours.
(2) Conventional or direct filtration treatment and serves fewer than 10,000 persons	(A) Shall be less than or equal to 0.3 NTU in at least 95 percent of the measurements taken each month;
	(B) For a supplier using a grab sample monitoring program: 1. Shall not exceed 1 NTU; and 2. Shall not exceed 1.0 NTU in more than two consecutive samples; and
	(C) For a supplier using a continuous monitoring program: 1. If recording results at least once every 15 minutes, shall comply with paragraph (1)(B); and 2. Shall comply with paragraphs (1)(C) and (1)(D).
(3) Diatomaceous earth filtration	(A) Shall be less than or equal to 0.5 NTU in at least 95 percent of the measurements taken each month;
	(B) Shall not exceed 5.0 NTU;
	(C) For a supplier using a grab sample monitoring program, shall comply with paragraph (2)(B)2; and
	(D) For a supplier using a continuous monitoring program, shall comply with paragraph (1)(D).
(4) Slow sand filtration	(A) Shall be less than or equal to 1.0 NTU in at least 95 percent of the measurements taken each month. Filtered water from the treatment plant may exceed 1.0 NTU, provided the filter effluent prior to disinfection meets the maximum contaminant level for total coliforms as specified in 22 CCR section 64426.1; and
	(B) Shall not exceed 5.0 NTU.

(a) If there is only one filter at the treatment plant, the combined filter effluent turbidity performance standards shall apply to the effluent produced by the filter.

(d) To obtain approval for a higher removal efficiency than that specified in subsection (b), a water supplier shall demonstrate to the State Board that the higher removal efficiency can be reliably obtained.

(e) An alternative to the filtration technologies specified in subsection (a) may be used provided that the supplier demonstrates to the State Board that the alternative technology:

(1) Provides a minimum of 99 percent *Giardia lamblia* cyst removal, 90 percent virus removal for the supplier serving more than 500 persons, and 99 percent *Cryptosporidium* removal; and

(2) Meets the turbidity performance standards established by the State Board, as determined from the alternative filtration technology demonstration conducted pursuant to subsection (f). The turbidity performance standards shall not be less stringent than the turbidity performance standards established in subsection (c)(1).

(f) The alternative filtration technology demonstration shall be based on the results from a prior equivalency demonstration or a testing of a full scale installation that is treating a water with similar characteristics and is exposed to similar hazards as the water proposed for treatment. A pilot plant test of the water to be treated may also be used for this demonstration if conducted with the approval of the State Board. The demonstration shall be presented in an engineering report prepared by a qualified engineer.

(g) A supplier proposing to use an alternative filtration technology may request from the State Board a waiver to comply with the requirements of subsection (e) to demonstrate 90 percent virus removal. The request shall be based on a watershed sanitary survey conducted in accordance with section 64665, within 12 months of the date of the request, that demonstrates a lack of virus hazard in the watershed.

(h) The State Board's approval of alternative filtration technologies, including establishment of performance standards and monitoring requirements, shall be done in accordance with the permit process specified in sections 116525 through 116550 of the Health and Safety Code.

(i) Within 60 days following the first full year of operation of a new alternative filtration treatment process approved by the State Board, the supplier shall submit an engineering report prepared by a qualified engineer describing the effectiveness of the plant operation. The report shall include results of all water quality tests performed and shall evaluate compliance with established performance standards under actual operating conditions. It shall also include an assessment of problems experienced, corrective actions needed, and a schedule for providing needed improvements.

Appendix 4

Instructions for Tier 2 SWTR Turbidity Exceedance Notice Template

Template Attached

Since surface water treatment filtration treatment technique violations are included in Tier 2, you must provide public notice to persons served as soon as practical but within 30 days after you learn of the violation [California Code of Regulations, Title 22, Chapter 15, Section 64463.4(b)]. **Each water system required to give public notice must submit the notice to the State Water Resources Control Board, Division of Drinking Water (DDW) for approval prior to distribution or posting, unless otherwise directed by the DDW [64463(b)].** This template may also be adapted for use with turbidity MCL violations.

For exceedance of single turbidity limits, you must consult with the DDW as soon as practical but within 24 hours of learning of the violation. During the consultation, the DDW may choose to elevate your turbidity exceedance to Tier 1. If consultation does not occur, the violation is automatically elevated to Tier 1 (See Tier 1 Turbidity Single Exceedance Instructions and Notice Template).

Notification Methods

You must use the methods summarized in the table below to deliver the notice to consumers. If you mail, post, or hand deliver, print your notice on letterhead, if available.

If You Are a…	*You Must Notify Consumers by…*	*…and By One or More of the Following Methods to Reach Persons Not Likely to be Reached by the Previous Method…*
Community Water System [64463.4(c)(1)]	Mail or direct delivery [(a)]	Publication in a local newspaper
		Posting [(b)] in conspicuous public places served by the water system or on the Internet
		Delivery to community organizations
Non-Community Water System [64463.4(c)(2)]	Posting in conspicuous locations throughout the area served by the water system [(b)]	Publication in a local newspaper or newsletter distributed to customers
		Email message to employees or students
		Posting [(b)] on the Internet or intranet
		Direct delivery to each customer

(a) Notice must be distributed to each customer receiving a bill including those that provide their drinking water to others (e.g., schools or school systems, apartment building owners, or large private employers), and other service connections to which water is delivered by the water system.

(b) Notice must be posted in place for as long as the violation or occurrence continues, but in no case less than seven days.

The notice attached is appropriate for the methods described above. However, you may wish to modify it before using it for posting. If you do, you must still include all the required elements and leave the health effects and notification language in italics unchanged. This language is mandatory [64465].

Multilingual Requirement

The notice must (1) be provided in English, Spanish, and the language spoken by any non-English-speaking group exceeding 10 percent of the persons served by the water system and (2) include a telephone number or address where such individuals may contact the water system for assistance.

If any non-English-speaking group exceeds 1,000 persons served by the water system, but does not exceed 10 percent served, the notice must (1) include information in the appropriate language(s) regarding the importance of the notice and 92) contain the telephone number or address where such individuals may contact the water system to obtain a translated copy of the notice from the water system or assistance in the appropriate language.

Population Served

Make sure it is clear who is served by your water system -- you may need to list the areas you serve.

Description of the Violation

Choose from the following descriptions and modify to fit your situation:

- *For Exceedance of Single Turbidity Limits* – "Normal turbidity levels at our plant are [number] turbidity units. A water sample taken [date] showed levels of [number] turbidity units. This was above the standard of [standard] units. Because of these high levels of turbidity, there is an increased chance that the water may contain disease-causing organisms."

- *For Exceedance of Monthly Turbidity Limits* – "Water samples for [month year] showed that [number] percent of turbidity measurements were over [standard] turbidity units. The standard is that no more than 5 percent of samples may exceed [standard] turbidity units per month. The turbidity levels are relatively low. However, their persistence is a concern. Normal turbidity levels at our plant are [number] turbidity units."

Corrective Action

In your notice, describe corrective actions you are taking. Listed below are some steps commonly taken by water systems with filtration treatment technique violations. Use one or more of the following actions, if appropriate, or develop your own:

- "We added chemicals that reduce turbidity."

- "We sampled both untreated and treated water for the presence of coliform bacteria."
- "We monitored chlorine levels and adjusted them as needed to compensate for the filtration problems."
- "We inspected and cleaned the filters."

After Issuing the Notice

Send a copy of each type of notice and a certification that you have met all the public notice requirements to the DDW within ten days after you issue the notice [64469(d)]. You should also issue a follow-up notice in addition to meeting any repeat notice requirements the DDW sets.

It is recommended that you notify health professionals in the area of the violation. People may call their doctors with questions about how the violation may affect their health, and the doctors should have the information they need to respond appropriately.

It is a good idea to issue a "problem corrected" notice when the violation is resolved.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

Barton Flats Water System
Did Not Meet Treatment Requirement (Turbidity)

Our water system recently violated a drinking water standard. Although this is not an emergency, as our customers, you have a right to know what you should do, what happened, and what we did to correct this situation.

We routinely monitor your water for turbidity (cloudiness). This tells us whether we are effectively filtering the water supply.

Water samples for March, May, June, and July 2017 showed that 10.3, 20, 53.6, and 66.6 percent of turbidity measurements respectively were over 0.2 turbidity units. The standard is that no more than 5 percent of samples may exceed 0.2 turbidity units per month. The turbidity levels are relatively low. However, their persistence is a concern. Normal turbidity levels at our plant are 0.2 and less turbidity units.

What should I do?

- **You do not need to boil your water or take other actions.**

- This is not an emergency. If it had been you would have been notified immediately. We do not know of any contamination, and none of our testing has shown disease-causing organisms in the drinking water.

- *Turbidity has no health effects. However, high levels of turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.* These symptoms are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.

- People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from U.S. EPA's Safe Drinking Water Hotline at 1(800) 426-4791.

- If you have other health issues concerning the consumption of the water, you may wish to consult your doctor.

What happened? What was done?

A problem occurred with the treatment system at the water plant. [Describe the reason for high turbidity, corrective actions, and when the system returned or expects to return to compliance].

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this public notice in a public place or distributing copies by hand or mail.

Secondary Notification Requirements

Upon receipt of notification from a person operating a public water system, the following notification must be given within 10 days [Health and Safety Code Section 116450(g)]:

- SCHOOLS: Must notify school employees, students, and parents (if the students are minors).
- RESIDENTIAL RENTAL PROPERTY OWNERS OR MANAGERS (including nursing homes and care facilities): Must notify tenants.
- BUSINESS PROPERTY OWNERS, MANAGERS, OR OPERATORS: Must notify employees of businesses located on the property.

This notice is being sent to you by Barton Flats Water System.

State Water System ID#: 3601048. Date distributed: _____.

Appendix 5: COMPLIANCE CERTIFICATION

Citation Number: 05-13-18C-013

Name of Water System: Barton Flats Water System

System Number: 3601048

Certification

I certify that the users of the water supplied by this water system were notified of the SWTR turbidity exceedance violation of California Code of Regulations, Title 22, Section 64653 for the compliance period of MARCH, MAY, JUNE, AND JULY 2017 and the required actions listed below were completed.

Required Action	Date Completed
(Citation Directive 1) Public Notification Method(s) Used:	

Signature of Water System Representative

Date

Attach a copy of the public notice distributed to the water system's customers

THIS FORM MUST BE COMPLETED AND RETURNED TO THE STATE BOARD, DIVISION OF DRINKING WATER, NO LATER THAN June 10, 2018

Disclosure: Be advised that the California Health and Safety Code, Sections 116725 and 116730 state that any person who knowingly makes any false statement on any report or document submitted for the purpose of compliance with the Safe Drinking Water Act may be liable for, respectively, a civil penalty not to exceed five thousand dollars ($5,000) for each separate violation or, for continuing violations, for each day that violation continues, or be punished by a fine of not more than $25,000 for each day of violation, or by imprisonment in the county jail not to exceed one year, or by both the fine and imprisonment.

APPENDIX 2

California Surface Water Treatment Rule
Alternative Filtration Technology Summary
CDPH DDWEM Technical Programs Branch – August 2011

SEE PAGE 3 FOR ROSEDALE

Manufacturer or Vendor	Model or Product Designation	Membrane Type	Pathogen log_{10} Removal Credit			Maximum Flux Lph/m^2 (gfd)	Maximum TMP (psi)
			Virus	*Giardia*	*Cryptosporidium*		
Membranes							
Aquasource	Advent	UF	*	4	4	136 (80)	29
Dow	Dow UF (SFD2860)	UF	*	4	4	102 (60)	30
GE Osmonics Desal	Desal DK5	NF	*	3	2 [A]	N/A	70-400 [B]
GE Zenon	ZeeWeed 500 series	UF	*	4	4	85 (49.8)	24 (in Hg)
	ZeeWeed [C] 1000 V2 & V3	UF	*	4	4	93.4 (55)	12 (vac)
	ZeeWeed 1000 V4 (550 sq-ft)	UF	*	4	4	102 (60)	13
	ZeeWeed 1500 (550 sq-ft)	UF	*	4	4	170 (100)	45
	Homespring [D] (UF207,UF209,UF211)	UF	*	4	4	(90)	40
Hydranautics	HYDRAcap	UF	*	4	4	119 (69.3)	18
Inge	Dizzer	UF	*	4	4	156 (92)	29
Koch	PMPW	UF	*	4	4	173 (102)	35
METAWATER (NGK)	431011	MF	*	4	4	(175)	55
Norit X-Flow	S225 UF	UF	*	4	4	127.3 (75)	31
	SXL225	UF	*	4	4	127.3 (75)	31
Pall	Microza USV 6203	MF	0.5 [E]	4	4	203.7 (120)	43.5
	Microza USV 5203	MF	0.5 [E]	4	4	203.7 (120)	43.5
	Microza UNA 620A	MF	0.5 [E]	4	4	203.7 (120)	43.5
	UNA 620A1	UF	*	4	4	102 (60)	51
Siemens Memcor	Polypropylene (M10B, M10C, S10T)	MF	0.5 [E]	4	4	110 (66.9)	15
			0 [E]	4	4	160 (93.6)	17
	PVdF (M10V)	MF	0.5 [E]	4	4	85 (50)	29
	PVdF (S10V, L10V, L20V)	UF	*	4	4	88 (52)	22
Toray	Torayfil (HFS-2020)	UF	*	4	4	202 (120)	29
	Torayfil (LSU-1515)	UF	*	4	4	83 (49)	10
Toyobo	Durasep (UPF0860, UPF0870)	UF	*	4	4	119 (70)	35
WestTech Polymem	UF 120S2	UF	*	4	4	45 (27)	21

* The Water Treatment Committee (WTC) has accepted this membrane as demonstrating at least 1-log virus removal. Virus removal credit for each plant will be assigned based on plant performance results and commitments as described in the operations plan. Regardless of removal credit, each plant is required to provide a minimum of 0.5-log *Giardia* and 4-log virus inactivation. Full-scale performance will depend on operational parameters such as actual *Cryptosporidium* operational Upper Control Limit and the amount of fouling.

California Surface Water Treatment Rule
Alternative Filtration Technology Summary
CDPH DDWEM Technical Programs Branch – August 2011

Manufacturer	Model or Product Designation	Clarifier Type	Pathogen log_{10} Removal Credit			Clarifier / Filter Loading Rate (gpm/ft^2)
			Virus	*Giardia*	*Crypto-sporidium*	
Contact Clarification-Filtration Systems						
American Water Technology, Inc.	MB/WF series [G]	Downflow	1 [H]	2 [H]	2	5 / 3 [J]
Culligan and Siemens	MultiTech	Downflow	1 [H]	2 [H]	2	3 / 3 [J]
Infilco Degremont	Advent Package Water Treatment Plant		2/1 [I]	2.5/2 [I]	2	
Siemens Microfloc	Trident; Trimite	Upflow-buoyant media	2/1 [I]	2.5/2 [I]	2	10 / 5 [K]
Pacific Keystone	KEY-PAC AC	Upflow-nonbuoyant media	1 [H]	2 [H]	2	10 / 5 [K]
Pata Engineering	PV-5 PV-10	Downflow	1 [H]	2 [H]	2	3-6 / 3 [J]
	PV-20 or larger	Upflow-non buoyant media	1 [H]	2 [H]	2	5-10 / 6 [K]
Roberts Filter Co.	Pacer II	Upflow-nonbouyant media	2/1 [I]	2.5/2 [I]	2	10 / 5 [K]
Pressure Filters						**Filter Loading Rate**
EPD Wearnes (USA) Inc.	EPD Alternative Filtration	Inline, High rate, dual stage	1	2	2	Up to 6 NTU [L]; 12 gpm/ft^2
Serck Baker	Hi Rate Pressure Filtration	Inline, High rate	1	2	2	Up to 20 NTU [L]; 5 gpm/ft^2
						Up to 9 NTU [L]; 12 gpm/ft^2

California Surface Water Treatment Rule
Alternative Filtration Technology Summary
CDPH DDWEM Technical Programs Branch – August 2011

Manufacturer	Model or Product Designation	Pathogen log_{10} Removal Credit			Filter Loading Rate (gpm/bag)	Maximum Pressure Differential (psi)
		Virus	*Giardia*	*Crypto-sporidium*		
Bag and Cartridge Filters						
USFilter	ELB 921	0	2		10	10
LaPointe Industries/ Strainrite	Aqua-Rite Potable Water Filtration System Bag Filter Model HPM97-CC-2SS	0	2	1.5	20	16
	Prefilter: HPM99-CC-2-SR *Final Filter:* HPM99-CCX-2-SR; both in an AQ2-2 housing Or In a AQ2-2B-SHD (350740) housing equipped with the AQ-1 compression device	0	3	3	20	25
Rosedale	*Prefilter:* GD-PO-523-2 *Final Filter:* GLR-PO-825-2	0	2	1	10 (w/ prefilter) 3 (w/out prefilter)	10
	Prefilter: PS-520 PP-241 *Final Filter:* GLR-PO-825-2 [M]	0	2	2	13 (must be operated with both filters in series as noted)	PS-520 PP-241: ΔP=20 GLR-PO-825-2: ΔP=2.5

[A] Desal DK5 - *Cryptosporidium* credit is based on the 2-log virus removal previously demonstrated. To be used on Bin 1 waters only. Integrity testing needs to be developed. (WTC 11/15/06)

[B] Desal DK5 - typical operating pressure range.

[C] The October 4, 2004 acceptance of the ZeeWeed 1000 membrane (including the V2 and V3 membranes) at 55 gfd and 12 psi superseded and replaced the prior acceptance at 30 gfd and 10 psi. The V3 membrane is accepted for 450 to 675 sf modules.

[D] Homespring UF211: manufacturer specifies maximum continuous flow at 4.5 gpm and TMP no higher than 20 psi to maintain warranty.

[E] The WTC has accepted this membrane as demonstrating at least 1-log virus removal as set forth in Section 64653(f) based on demonstration of at least 1-log removal 50 percent of the time, while 0.5-log removal was demonstrated 95 percent of the time.

[F] Memcor Polypropylene (for 0-log virus removal credit): In order for this technology to be used in systems serving more than 500 persons, the utility must request and receive from CDPH a waiver for the 1-log (90 percent) virus removal requirement. The request must include sufficient information to demonstrate the lack of a virus hazard in the watershed, including but not limited to, an updated watershed sanitary survey.

[G] American Water Technology offers multiple system sizes under the MB/WF treatment series. All systems held to the same maximum clarifier and filter loading rates are expected to have equivalent performance.

[H] Accepted as equivalent to direct filtration only; turbidity performance standard is 0.3 NTU in 95% of samples, not to exceed 1.0 NTU.

[I] Accepted as equivalent to conventional and direct filtration, with different removal credit and turbidity performance standard for each operating mode:

Conventional filtration mode:	turbidity performance standard = 0.2 NTU, not to exceed 1.0 NTU
Direct filtration mode:	turbidity performance standard = 0.3 NTU, not to exceed 1.0 NTU

[J] Multi-media pressure filter – maximum filter loading rate of 3.0 gpm/ft^2 allowed under the SWTR

[K] Multi-media gravity filter – maximum filter loading rate of 6.0 gpm/ft^2 allowed under the SWTR

[L] Source water maximum turbidity

[M] See 2/14/2007 memo "Rosedale Model Number Guidance" and associated "Interpreting Model Numbers." This memo is intended to aid those inspecting and permitting water systems using Rosedale filtration systems as an alternative filtration technology to meet the requirements of the Surface Water Treatment Rule.

Disclaimer: This summary of accepted alternative filtration technologies has been extracted from the Department's Alternative Filtration Technology Report (June 2001 Draft) and individual acceptance letters. It is not intended to be used as a standalone document for persons planning, designing, or operating a water treatment plant. The summary does not contain all exceptions or qualifications for the individual filtration technologies. Please consult the Department's Alternative Filtration Technology report and the individual acceptance letters for additional details and recommendations.

Copies of the acceptance letters issued by the Department for the alternative filtration technology may be obtained from the Drinking Water Program district offices. The Alternative Filtration Technology Report may be downloaded from the Department's website at: http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Publications.aspx

Review and approval of an alternative filtration technology listed in this summary for use on a particular public water system source will be handled on a case-by-case basis via the permit process by the CDPH District offices.

California Surface Water Treatment Alternative Filtration Technology Demonstration Report*

June 2001

Contents

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* Edited by: R.H. Sakaji

Reviewed and Approved by SWTR Committee: R. Haberman (chair), R. Hultquist, G. Yamamoto, B. Bernardos, C. Lischeske, R. Sakaji, P. Gilbert-Snyder, K. Souza, G. Schott, J. Stone, M. Olmsted, F. Baumann, S-F. Orr

A. Introduction

The filtration technologies presented herein have completed a demonstration of filtration effectiveness to satisfy the requirements of the California Surface Water Treatment Rule (CCR, Title 22, Chapter 17, Section 64653(f)) (CSWTR), as alternative filtration technologies. The demonstration studies were designed and conducted in accord with the California Department of Health Services, Division of Drinking Water and Environmental Management, Drinking Water Program (DWP).

B. Appropriate Permit Provisions

The CSWTR specifies certain requirements only for the four recognized conventional filtration technologies. For alternatives to these technologies, technology specific requirements are set in the individual water supply permit. Examples of appropriate permit provisions, addressing all performance standard related issues in the CSWTR that apply to alternative technologies follow, with the numerical component given as an alphanumeric variable. This example is written in a form that can be applied directly to a conventional media filter. The field engineer shoud carefully review the example permit provisions and the text of the provisions and modify as appropriate for the respective alternative filtration technology. The values for the alphanumeric variables can be found in the summary provided in Table 1.

Section 64653(c) equivalent for these technologies

The turbidity level of the filtered water shall be equal to or less than **A** NTU in 95 percent of the measurements taken each month and shall not exceed **B** NTU at any time.

When using a grab sampling monitoring program the turbidity level of the filtered water shall not exceed **C** NTU in more than two samples taken consecutively while the plant is in operation. When using a continuous monitoring program the turbidity level of the filtered water shall not exceed **C** NTU for more than eight consecutive hours while the plant is in operation.

Section 64660(b)(6) equivalent for these technologies

When any individual filter is placed back into service the filtered water turbidity of the effluent from that filter shall not exceed any of the following:

(a) **D** NTU.

(b) **E** NTU in at least 90 percent of the interruption events during any consecutive 12-month period.

(c) **A** NTU after the filter has been in operation for 4 hours.

Section 64655(b) and (d) equivalent for these technologies

To determine compliance with the turbidity performance standards specified, the turbidity level of representative samples of the combined filter effluent, prior to clearwell storage, shall be determined at least once every **four** hours that the system is in operation. Small water systems may demonstrate compliance by collecting grab samples once per day provided the system has been properly evaluated after installation and it has been documented that the daily sample is representative of system operation. Monitoring shall be conducted in accordance with the approved operations plan.

Section 64663(a & b) equivalent for these technologies

The supplier shall notify the Department within 24 hours by telephone whenever: a) the turbidity of the combined filter effluent exceeds **B** NTU at any time; or b) more than two consecutive turbidity samples of the combined filter effluent taken every four hours exceed **C** NTU.

13. Rosedale Bag Filtration System

(Bob Hultquist; modified by Paul Gilbert-Snyder, Kurt Souza and Grant Manning)

Product: Company: Contact:	**Rosedale Bag Filtration System** Rosedale Products of California John Bush, (209) 683-6854
Technology:	two-stage bag system: prefilter (GD-PO-523-2), followed by a primary *Giardia* barrier (GLR-PO-82502), integrated into package plant, granular media prefilter as necessary
Study at:	Cactus CalTrans rest stop
By:	
Systems using:	
Raw Source:	Colorado R. Raw water up to 2 NTU (this technology can be used on source water with higher turbidities, but the source must be pretreated to 2 NTU)
Removal Credit:	1.0-log *Cryptosporidium*; 2.0-log *Giardia*; 0-log virus removal[+]
Performance Std:	A = 0.2 NTU, to be met 95% of time, not to exceed 0.5 NTU
	B = 1.0, C = 0.5, D = 1.0, E = na
Operation criteria:	head loss not to exceed 10 psi up to 10 gpm per bag with prefilter less than 3 gpm without prefilter
Design criteria:	pressure relief to protect bags from an excessive pressure surge and possible bag rupture filter to waste (FTW) after installation of new bag
Operation plan:	gradually increase flow FTW for a minimum of 5 minutes after installation of new bag.
Study:	

[+] Under the current SWTR regulations, CCR Title 22 Chapter 17 Article 2 Section 64653 (f), alternative technologies must demonstrate that they can provide a minimum of 99 percent *Giardia* cyst removal and 90 percent virus removal to be used in systems serving more than 500 persons. The 90 percent virus removal requirement can be waived, at the request of the supplier, under Section 64653 (g) if the supplier can, through their watershed sanitary survey, demonstrate the lack of a virus hazard in the watershed.

The filtration technology tested consisted of a prefilter (a GD-PO-523-2 nine layer polypropylene bag, supported by a stainless steel basked, in a 8-30-2F-2SP-150-N-S-N-FG-S-B-DP bag housing) followed by a primary *Giardia* barrier (a GLR-PO-82502-20+ layer polypropylene bag rigid outer shell supported by a stainless steel basket, in a 8-30-2F-2SP-150-N-S-NFG-S-GB-Dp bag housing). The Rosedale Bag Filtration System contains the necessary piping, valve, bag vessels, hydraulic instrumentation and controls, and turbidity sampling taps to constitute a complete filtration process.

The demonstration was conducted on a low turbidity surface source at Cal-Trans Cactus Reststop, California using a full size Rosedale Bag Filtration System. The source water turbidity ranged from 0.40 to 2.5 NTU during the study. The virus removal requirement

was waived for this source per SWF&DR Section 64653 (g). The demonstration was made using particle count and turbidity data. Performance of the filtration system is documented in a report entitled : Cal-Trans Cactus City Filtration Demonstration Study Results.

The filtration system successfully demonstrated the ability to reliably achieve 99% (2-log) *Giardia* cyst removal. This organism removal was achieved while an effluent turbidity of 0.2 NTU or less was observed in at least 95% of all measurements. It is not known whether the Rosedale Filtration System would meet the same organism removal efficiency while producing a higher turbidity effluent. Virus removal efficiency was not included in this study. The particle count data indicate a 90% (1-log) Cryptosporidium oocyst removal capability.

The prefilter was not used during all test runs and is not required for the organism removal credit. The prefilter is required only for high hydraulic loading rates (see subsequent discussion) and is desirable to extend the life of the *Giardia* barrier.

The appropriate permit provisions that addresses notification, Section 64663 (a & b), for this alternative technology, might read: "The supplier shall notify the Department within 24 hours by telephone whenever the turbidity of the combined filter effluent exceeds 1.0 NTU at any time."

To prevent possible bag rupture the installation of the Rosedale Bag Filtration System must include pressure relief to protect the *Giardia* barrier from a pressure surge that would cause a pressure differential across the bag in excess of 30 psi.

An operations plan for this filtration technology should address how loss of bag or seal integrity will be defined. An alarm triggered by a drop in headloss is acceptable (headloss monitoring should be continuous). The plan must make it clear that the rinse of vessels at bag change is done with treated water. The plan must identify the maximum flow through each *Giardia* barrier (not to exceed 3 gpm without a prefilter, 10 gpm with a prefilter bag) and the maximum operating headloss across each bag not to exceed 20 psi for the prefilter and 10 psi for the *Giardia* barrier. The plan shall identify the minimum supply of replacement bags that will be maintained on site and justify this number in light of the anticipated rate of use and availability. A record must be kept of bag purchases to be used to verify that they are not being reused. The system must filter to waste for five minutes upon startup of each new bag.

The Rosedale Bag Filtration System is effective for raw water turbidities up to two NTU. The Rosedale Bag Filtration System could be used on sources with turbidities in excess of two NTU if additional prefiltration were provided and operated to meet a two NTU performance standard. An existing non-complying filter plant may serve this purpose. The additional prefiltration cannot be expected to provide virus removal.

The Rosedale Bag Filtration System is an acceptable filtration technology for protected sources where the virus removal requirement can be waived and the turbidity is less than 2.0 NTU.

***Cryptosporidium* Removal Credit**. The Cal Trans Cactus Filtration Demonstration Study Results were evaluated again to determine the log removal capability of the Rosedale Bag Filtration System on Cryptosporidium oocysts. The goal of the evaluation was to determine the log reduction between the raw particle count and the filtered particle count for particles ranging from 2-5 μm in size 95% of the time.

The original data was evaluated and a log removal verses percentile graph was generated. Data from runs 4 and 5 were not included due to problems with the data noted in the study report. Also, any particle count data collected when the pressure differential across the Rosedale filter was greater than 10 psi was not included.

As a result of this evaluation, the Rosedale Bag Filtration system successfully demonstrated the ability to reliably achieve 90% (1-log) Cryptosporidium oocyst removal.

MONTHLY SUMMARY OF MONITORING
FOR SURFACE WATER TREATMENT REGULATIONS

System Name: **Barton Flats Water Association** System Number: **3601048-001**

Plant Name: Month/Year: **March-17**

	Date	Peak Raw Water Turbidity	Peak Settled Water Turbidity	Treated water turbidities every four hours (NTU)[1] Midnight to 4:00 am	4:00 am to 8:00 am	8:00 am to noon	Noon to 4:00 pm	4:00 pm to 8:00 pm	8:00 pm to Midnight	Average
Wed	1		N/A							-
Thu	2	0.7	N/A					0.13		0.13
Fri	3	0.8	N/A					0.13		0.13
Sat	4	0.8	N/A					0.14		0.14
Sun	5	0.8	N/A					0.11		0.11
Mon	6	0.8	N/A					0.18		0.18
Tue	7	0.8	N/A					0.16		0.16
Wed	8	0.0	N/A					0.00		-
Thu	9	1.3	N/A					0.16		0.16
Fri	10	1.2	N/A					0.14		0.14
Sat	11	1.3	N/A					0.17		0.17
Sun	12	1.2	N/A					0.15		0.15
Mon	13	1.4	N/A					0.18		0.18
Tue	14	2.2	N/A					0.11		0.11
Wed	15	3.0	N/A					0.11		0.11
Thu	16	1.2	N/A					0.12		0.12
Fri	17	1.1	N/A					0.18		0.18
Sat	18	1.0	N/A					0.16		0.16
Sun	19	1.1	N/A					0.11		0.11
Mon	20	1.8	N/A					**0.26**		**0.26**
Tue	21	1.1	N/A					**0.28**		**0.28**
Wed	22	2.8	N/A					**0.25**		**0.25**
Thu	23	2.3	N/A					**0.24**		**0.24**
Fri	24	0.9	N/A					**0.24**		**0.24**
Sat	25	0.8	N/A					**0.22**		**0.22**
Sun	26	0.8	N/A					**0.22**		**0.22**
Mon	27	0.8	N/A					0.17		0.17
Tue	28	0.7	N/A					0.20		0.20
Wed	29	1.1	N/A					0.18		0.18
Thu	30	2.4	N/A					0.17		0.17
Fri	31	1.2	N/A					0.17		0.17
	Avg.	1.3	-	-	-	-	-	0.17	-	

[1] *For continuous turbidity monitoring, a discrete turbidity value must be taken off the record chart at four hour intervals.*
***Note:** See Directions on reporting peak raw and settled water turbidities.*

Total Number of Samples: **29**
% Readings <=0.2 NTU: **93.1%**

Number of readings <= 0.2 NTU: **27**
Average Effluent NTU: **0.17**
Meets Standard (i.e. More than 95% of readings are <= 0.2 NTU) (Y/N)? **NO**

Maximum discrete turbidity value: **0.28**
Average percent reduction during the month = [(Average Raw NTU - Average Effluent NTU)/(Average Raw NTU)] x 100% = **86.4%**
Meets Standard (i.e. Reduction is greater than 80%) (Y/N)? **Yes**

Percentile Results:		
xth Percentile NTU Value of all turbidity readings:	50 th =	**0.17**
(x% of all turbidity readings are less than these values)	90 th =	**0.24**
	95 th =	**0.26**
	98 th =	**0.27**
	99 th =	**0.27**

Incidents of turbidity greater than 0.5 NTU

Date of Incident					
Value					

Total number of incidents where turbidity is > 0.5 NTU: _____ > 1 NTU: _____

Meet Standards (I.e. NTU is not > 0.5 for more than eight consecutive hours) (Y/N): _____

After placing the filter back into service after any interruption (e.g. backwashing), did the filter effluent comply with the following criteria:

a: <= 2.0 NTU after all events (Y/N)? _____
b: <= 1.0 NTU after 90% events (Y/N)? _____
c: <= 0.2 NTU after four hours (Y/N)? _____

Indicate the date that the turbidimeters that are used for regulatory monitoring purposes were calibrated:

Date	Which Turbidimeter	Which standards used, primary or secondary	Date	Which Turbidimeter	Which standards used, primary or secondary
2/3/2017	influent	primary	2/3/2017	effluent	primary

DISINFECTION PROCESS DATA

Disinfectant residual type (check one):
- (●) Free Chlorine
- ( ) Combined Chlorine
- ( ) Other

Incidents of chlorine residuals less than 0.2 ppm at the plant effluent:

Date of Incident					
Duration					
Date Dept. Notified					

Total number of incidents where residual is < 0.2 ppm: _____

Meet Standard (i.e. is not less than 0.2 ppm for more than four hours (Y/N)? _____

Number of distribution system residual samples collected:	7
Number of distribution system samples for HPC only:	
Total number of residual and/or HPC samples collected:	7
Number of samples with no detectable residual and HPC is not measured:	0
Number of samples with no residual and HPC > 500 CFU/mL:	0
Number of samples for HPC only and HPC > 500 CFU/mL:	0
Total number of samples with no residual and/or HPC > 500 CFU/mL:	0

Compute V:

Where V = [1 - (Total No. of samples with no residual and/or HPC > 500)/(Total No. of residual and/or HPC samples collected)] x 100

V = 100.0%

Meets Standard (I.e. V >= 95%) (Y/N) ? Yes

SUMMARY OF WATER QUALITY COMPLAINTS

General Complaints:

Type of Complaint	Number	Corrective Actions Taken
Taste/Odor		
Color	6	color due to lake fire,looking into best available technologie
Turbidity		
Suspended Solids		
Other (Describe)		

Reports of Gastrointestinal Illness (attach additional sheets if necessary):

Person Reporting	Date	Corrective Actions Taken

Attach an explanation of any failure of the performance standards or operating criteria and corrective action taken or planned.

Signature: _____

Date: _____

Information for Disinfection CT Compliance

Date	Previous Production Reading, gallons	Current production Reading, gallons	Water Produced (Current - Previous), gallons	Peak flow, gpm	pH	Temp.°C	Chlorine analyzer, mg/L
1	68279600	68297200	17600	24	7.2	38	2.15
2	68297200	68336000	38800	20	NA	NA	2.14
3	68336000	68366400	30400	20	NA	NA	2.41
4	68366400	68391300	24900	19	NA	NA	2.21
5	68391300	68416500	25200	19	NA	NA	2.13
6	68416500	68445000	28500	18.9	7.3	37	2.72
7	68445000	68463600	18600	18	NA	NA	2.19
8	68463600	68480100	16500	0	NA	NA	0
9	68480100	68480300	200	22	NA	NA	2.13
10	68480300	68480300	0	21.9	NA	NA	2.34
11	68480300	68480300	0	21.4	NA	NA	2.17
12	68480300	68506300	26000	21.4	NA	NA	2.24
13	68506300	68538300	32000	21	7.2	38	2.11
14	68538300	68551900	13600	24	NA	NA	2.22
15	68551900	68567500	15600	17.5	NA	NA	2.12
16	68567500	68596300	28800	19.9	NA	NA	2.18
17	68596300	68623200	26900	19	NA	NA	2.2
18	68623200	68645700	22500	18	NA	NA	2.12
19	68645700	68670400	24700	17.1	NA	NA	2.38
20	68670400	68670400	0	NA	NA	NA	NA
21	68670400	68714800	44400	22	NA	NA	2.41
22	68714800	68740700	25900	20	NA	NA	2.81
23	68740700	68769500	28800	21.8	NA	NA	2.84
24	68769500	68792400	22900	24.3	NA	NA	2.84
25	68792400	68814500	22100	20	NA	NA	2.03
26	68814500	68840700	26200	19.4	7.3	37	2.18
27	68840700	68870700	30000	19	NA	NA	2.48
28	68870700	68880000	9300	14.7	NA	NA	2.34
29	68880000	68902700	22700	17.2	NA	NA	2.14
30	68902700	68914700	12000	22.1	NA	NA	2.28
31	68914700	68947500	32800	24.1	NA	NA	2.29
AVG	NA	NA	21545.161	19.55667	7.25	37.5	2.226667
Max	NA	NA	44400	24.3	7.3	38	2.84
Min	NA	NA	0	0	7.2	37	0
Total	NA	NA	667900	NA	NA	NA	NA

MONTHLY SUMMARY OF MONITORING
FOR SURFACE WATER TREATMENT REGULATIONS

System Name: baron flats association System No. 3601048-001

Plant Name: platinum fillters Month/Year: march 2017

	Giardia/Crypto Pre Filter																											
	Filter 1, psi			Filter 2, psi			Filter 3, psi			Filter 4, psi			Filter 5, psi			Filter 6, psi			Filter 7, psi			Filter 8, psi			Overall Gauge, psi		
Date	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff
1	8	6	2	8	6	2	8	6	2	8	6	2	8	6	2	9	7	2	8	6	2	8	6	2	8	6	2
2	8	6	2	8	6	2	8	6	2	8	6	2	8	6	2	9	7	2	8	6	2	8	6	2	8	6	2
3	8	6	2	8	6	2	8	6	2	8	6	2	8	6	2	9	7	2	8	6	2	8	6	2	8	6	2
4	8	6	2	8	6	2	8	6	2	8	6	2	8	6	2	9	7	2	8	6	2	8	6	2	8	6	2
5	8	6	2	8	6	2	8	6	2	8	6	2	8	6	2	9	7	2	8	6	2	8	6	2	8	6	2
6	8	6	2	8	6	2	8	6	2	8	6	2	8	6	2	9	7	2	8	6	2	8	6	2	8	6	2
7	9	6	3	9	6	3	9	6	3	9	6	3	9	6	3	9	6	3	9	6	3	9	6	3	9	6	3
8	9	6	3	9	6	3	9	6	3	9	6	3	9	6	3	9	6	3	9	6	3	9	6	3	9	6	3
9	9	6	3	9	6	3	9	6	3	9	6	3	9	6	3	9	6	3	9	6	3	9	6	3	9	6	3
10	9	6	3	9	6	3	9	6	3	9	6	3	9	6	3	9	6	3	9	6	3	9	6	3	9	6	3
11	11	6	3	11	8	3	11	6	3	11	8	3	11	8	3	11	8	3	11	8	3	11	8	3	11	8	3
12	14	6	8	14	6	8	14	8	8	14	6	8	14	6	8	14	6	8	14	6	8	14	6	8	14	6	8
13	14	6	8	14	6	8	14	6	8	14	6	8	14	6	8	14	6	8	14	6	8	14	6	8	14	6	8
14	14	6	8	14	6	8	14	6	8	14	6	8	14	6	8	14	6	8	14	6	8	14	6	8	14	6	8
15	12	6	6	12	6	6	12	6	6	12	6	6	12	6	6	12	6	6	12	6	6	12	6	6	12	6	6
16	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8
17	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8
18	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8
19	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8
NA																											
21	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8
22	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8
23	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8
24	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8
25	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8
26	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8
27	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8	18	10	8
28	19	10	8	19	10	9	19	10	9	19	10	9	19	10	9	19	10	9	19	10	9	19	10	9	19	10	9
29	19	10	9	19	10	9	19	10	9	19	10	9	19	10	9	19	10	9	19	10	9	19	10	9	19	10	9
30	NA																										
31	19	10	9	19	10	9	19	10	9	19	10	9	19	10	9	19	10	9	19	10	9	19	10	9	19	10	9
MAX	19	10	9	19	10	9	19	10	9	19	10	9	19	10	9	19	10	9	19	10	9	19	10	9	19	10	9

MONTHLY SUMMARY OF MONITORING
FOR SURFACE WATER TREATMENT REGULATIONS

System Name: barton flats association System No. 3601048-001

Plant Name: giardia Month/Year: march 2017

	Giardia/Crypto Final Filter																											
	Filter 1, psi			Filter 2, psi			Filter 3, psi			Filter 4, psi			Filter 5, psi			Filter 6, psi			Filter 7, psi			Filter 8, psi			Overall Gauge, psi		
Date	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff
1	20	13	7	20	13	7	22	13	7	22	13	7	22	13	7	22	13	7	22	13	7	22	13	7	22	13	7
2	20	13	7	20	13	7	22	13	7	22	13	7	22	13	7	22	13	7	22	13	7	22	13	7	22	13	7
3	20	13	7	20	13	7	22	13	7	22	13	7	22	13	7	22	13	7	22	13	7	22	13	7	22	13	7
4	20	13	7	20	13	7	22	13	7	22	13	7	22	13	7	22	13	7	22	13	7	22	13	7	22	13	7
5	20	13	7	20	13	7	22	13	7	22	13	7	22	13	7	22	13	7	22	13	7	22	13	7	22	13	7
6	20	13	7	20	13	7	22	13	7	22	13	7	22	13	7	22	13	7	22	13	7	22	13	7	22	13	7
7	22	13	9	22	13	9	22	13	9	22	13	9	22	13	9	22	13	9	22	13	9	22	13	9	22	13	9
8	22	13	9	22	13	9	22	13	9	22	13	9	22	13	9	22	13	9	22	13	9	22	13	9	22	13	9
9	22	13	9	22	13	9	22	13	9	22	13	9	22	13	9	22	13	9	22	13	9	22	13	9	22	13	9
10	22	13	9	22	13	9	22	13	9	22	13	9	22	13	9	22	13	9	22	13	9	22	13	9	22	13	9
11	21	15	6	21	15	6	21	15	6	21	15	6	21	15	6	21	15	6	21	15	6	21	15	6	21	15	6
12	22	16	6	22	16	6	22	16	6	22	16	6	22	16	6	22	16	6	22	16	6	22	16	6	22	16	6
13	22	16	6	22	16	6	22	16	6	22	16	6	22	16	6	22	16	6	22	16	6	22	16	6	22	16	6
14	22	16	6	22	16	6	22	16	6	22	16	6	22	16	6	22	16	6	22	16	6	22	16	6	22	16	6
15	20	16	6	20	16	6	20	16	6	20	16	6	20	16	6	20	16	6	20	16	6	20	16	6	20	16	6
16	22	20	2	22	20	2	22	20	2	22	20	2	22	20	2	22	20	2	22	20	2	22	20	2	22	20	2
17	22	20	2	22	20	2	22	20	2	22	20	2	22	20	2	22	20	2	22	20	2	22	20	2	22	20	2
18	22	20	2	22	20	2	22	20	2	22	20	2	22	20	2	22	20	2	22	20	2	22	20	2	22	20	2
19	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10
20	NA																										
21	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10
22	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10
23	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10
24	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10
25	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10
26	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10
27	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10	30	20	10
28	31	20	11	31	20	11	31	20	11	31	20	11	31	20	11	31	20	11	31	20	11	31	20	11	31	20	11
29	31	20	11	31	20	11	31	20	11	31	20	11	31	20	11	31	20	11	31	20	11	31	20	11	31	20	11
30	NA																										
31	31	20	11	31	20	11	31	20	11	31	20	11	31	20	11	31	20	11	31	20	11	31	20	11	31	20	11
MAX	31	20	11	31	20	11	31	20	11	31	20	11	31	20	11	31	20	11	31	20	11	31	20	11	31	20	11

MONTHLY SUMMARY OF MONITORING
FOR SURFACE WATER TREATMENT REGULATIONS

System Name: **Barton Flats Water System** System Number: **3601048**

Plant Name: Month/Year: **May-17**

	Date	Peak Raw Water Turbidity	Peak Settled Water Turbidity	Treated water turbidities every four hours (NTU)[1] Midnight to 4:00 am	4:00 am to 8:00 am	8:00 am to noon	Noon to 4:00 pm	4:00 pm to 8:00 pm	8:00 pm to Midnight	Average
Mon	1		N/A							-
Tue	2	1.7	N/A					0.11		0.11
Wed	3	2.2	N/A					0.18		0.18
Thu	4	2.3	N/A					0.17		0.17
Fri	5	1.4	N/A					0.15		0.15
Sat	6	1.2	N/A					0.18		0.18
Sun	7	1.4	N/A					0.14		0.14
Mon	8	2.1	N/A					0.15		0.15
Tue	9	1.2	N/A					0.15		0.15
Wed	10	1.0	N/A					0.13		0.13
Thu	11	1.0	N/A					0.13		0.13
Fri	12	1.0	N/A					0.15		0.15
Sat	13	1.0	N/A					0.18		0.18
Sun	14	1.0	N/A					0.15		0.15
Mon	15	1.0	N/A					0.19		0.19
Tue	16	1.9	N/A					0.10		0.10
Wed	17	1.2	N/A					0.20		0.20
Thu	18	1.3	N/A					0.13		0.13
Fri	19	2.4	N/A					0.17		0.17
Sat	20	2.1	N/A					0.14		0.14
Sun	21	1.3	N/A					0.12		0.12
Mon	22	1.7	N/A					**0.22**		**0.22**
Tue	23	1.6	N/A					**0.24**		**0.24**
Wed	24	2.2	N/A					**0.24**		**0.24**
Thu	25	2.4	N/A					**0.25**		**0.25**
Fri	26	2.1	N/A					**0.25**		**0.25**
Sat	27	2.1	N/A					**0.30**		**0.30**
Sun	28	2.4	N/A					**0.31**		**0.31**
Mon	29	1.8	N/A					**0.31**		**0.31**
Tue	30	3.0	N/A					**0.24**		**0.24**
Wed	31	1.5	N/A					**0.26**		**0.26**
	Avg.	1.7	-	-	-	-	-	0.19	-	

[1] *For continuous turbidity monitoring, a discrete turbidity value must be taken off the record chart at four hour intervals.*
Note: *See Directions on reporting peak raw and settled water turbidities.*

Total Number of Samples: **30**
% Readings <=0.2 NTU: **83.3%**

Number of readings <= 0.2 NTU: **25**
Average Effluent NTU: **0.19**
Meets Standard (i.e. More than 95% of readings are <= 0.2 NTU) (Y/N)? **NO**

Maximum discrete turbidity value: **0.31**
Average percent reduction during the month = [(Average Raw NTU - Average Effluent NTU)/(Average Raw NTU)] x 100% = **88.9%**
Meets Standard (i.e. Reduction is greater than 80%) (Y/N)? **Yes**

Percentile Results:		
xth Percentile NTU Value of all turbidity readings:	50 th =	**0.17**
(x% of all turbidity readings are less than these values)	90 th =	**0.27**
	95 th =	**0.30**
	98 th =	**0.31**
	99 th =	**0.31**

Incidents of turbidity greater than 0.5 NTU

Date of Incident					
Value					

Total number of incidents where turbidity is > 0.5 NTU: _____ > 1 NTU: _____

Meet Standards (I.e. NTU is not > 0.5 for more than eight consecutive hours) (Y/N): _____

After placing the filter back into service after any interruption (e.g. backwashing), did the filter effluent comply with the following criteria:

a: <= 2.0 NTU after all events (Y/N)? _____

b: <= 1.0 NTU after 90% events (Y/N)? _____

c: <= 0.2 NTU after four hours (Y/N)? _____

Indicate the date that the turbidimeters that are used for regulatory monitoring purposes were calibrated:

Date	Which Turbidimeter	Which standards used, primary or secondary	Date	Which Turbidimeter	Which standards used, primary or secondary

DISINFECTION PROCESS DATA

Disinfectant residual type (check one):

- (●) Free Chlorine
- ( ) Combined Chlorine
- ( ) Other

Incidents of chlorine residuals less than 0.2 ppm at the plant effluent:

Date of Incident					
Duration					
Date Dept. Notified					

Total number of incidents where residual is < 0.2 ppm: _____

Meet Standard (i.e. is not less than 0.2 ppm for more than four hours (Y/N)? _____

Number of distribution system residual samples collected:	
Number of distribution system samples for HPC only:	
Total number of residual and/or HPC samples collected:	0
Number of samples with no detectable residual and HPC is not measured:	
Number of samples with no residual and HPC > 500 CFU/mL:	
Number of samples for HPC only and HPC > 500 CFU/mL:	
Total number of samples with no residual and/or HPC > 500 CFU/mL:	0

Compute V:

Where V = [1 - (Total No. of samples with no residual and/or HPC > 500)/(Total No. of residual and/or HPC samples collected)] x 100

V = _____ -

Meets Standard (I.e. V >= 95%) (Y/N) ? _____ -

SUMMARY OF WATER QUALITY COMPLAINTS

General Complaints:

Type of Complaint	Number	Corrective Actions Taken
Taste/Odor		
Color	3	researching BAT
Turbidity		
Suspended Solids		
Other (Describe)		

Reports of Gastrointestinal Illness (attach additional sheets if necessary):

Person Reporting	Date	Corrective Actions Taken

Attach an explanation of any failure of the performance standards or operating criteria and corrective action taken or planned.

Signature: LeeE Fulmer

Date: 5-23-17, 5-27-17, 5-29-17

MONTHLY SUMMARY OF MONITORING
FOR SURFACE WATER TREATMENT REGULATIONS

Information for Disinfection CT Compliance

Date	Previous Production Reading, gallons	Current production Reading, gallons	Water Produced (Current - Previous), gallons	Peak flow, gpm	pH	Temp.°C	Chlorine analyzer, mg/L
1		69694500	69694500				
2	69694500	69710900	16400	35.7			2.03
3	69710900	69753700	42800	33			2.31
4	69753700	69799100	45400	32			2.18
5	69799100	69836500	37400	32	7.2	38	2.21
6	69836500	69574100	-262400	34.5			2.31
7	69574100	69926520	352420	34			2.21
8	69926520	69944900	18380	26			2.26
9	69944900	69987700	42800	24			2.15
10	69987700	70023700	36000	22.6			2.44
11	70023700	70044800	21100	21.4			2.87
12	70044800	70077600	32800	23.3			2.46
13	70077600	70101500	23900	23			2.41
14	70101500	70147400	45900	20.6	7.4	40	2.3
15	70147400	70105100	-42300	21.1			2.21
16	70105100	70196900	91800	24			2.14
17	70196900	70216900	20000	25			2.24
18	70216900	70246500	29600	26			2.31
19	70246500	70261800	15300	41.2			2.21
20	70261800	70353700	91900	41.9			2.13
21		70353700	70353700	38			2.05
22	70353700	70409560	55860	41.7			2.03
23	70409560	70473300	63740	35			2.03
24	70473300	70502700	29400	29			2.16
25	70502700	70528900	26200	36			2.03
26	70528900	70569300	40400	55	7.3	43	2.18
27	70569300	70609800	40500	38			2.24
28	70609800	70662400	52600	34			2.03
29	70662400	70706560	44160	37			2.01
30	70706560	70739100	32540	35			2.21
31	70739100	70773800	34700	35			2.03
AVG	NA	NA	4552500	31.83333	7.3	40.33333	2.212667
Max	NA	NA	70353700	55	7.4	43	2.87
Min	NA	NA	-262400	20.6	7.2	38	2.01
Total	NA	NA	141127500	NA	NA	NA	NA

MONTHLY SUMMARY OF MONITORING
FOR SURFACE WATER TREATMENT REGULATIONS

System Name: Barton flats water System No. 36 01048

Plant Name: Giardia Month/Year: May 2017

	Giardia/Crypto Pre Filter																											
	Filter 1, psi			Filter 2, psi			Filter 3, psi			Filter 4, psi			Filter 5, psi			Filter 6, psi			Filter 7, psi			Filter 8, psi			Overall Gauge, psi		
Date	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff
1	6	6	0	6	6	0	8	8	0	8	8	0	6	8	2	8	8	0	10	8	2	4	8	4	8	8	0
2	6	6	0	6	6	0	8	8	0	8	8	0	6	8	2	8	8	0	10	8	2	4	8	4	8	8	0
3	6	6	0	6	6	0	8	8	0	8	8	0	6	8	2	8	8	0	10	8	2	4	8	4	8	8	0
4	6	6	0	6	6	0	8	8	0	8	8	0	6	8	2	8	8	0	10	8	2	4	8	4	8	8	0
5	8	6	2	8	6	2	8	6	2	10	8	2	6	8	2	8	6	2	10	8	2	6	8	2	8	8	0
6	8	6	2	8	6	2	8	6	2	10	8	2	6	6	2	8	6	2	10	8	2	6	8	2	6	8	2
7	8	6	2	8	6	2	8	6	2	10	8	2	8	6	2	8	6	2	10	8	2	6	8	2	6	8	2
8	8	6	2	8	6	2	8	6	2	10	8	2	8	6	2	8	6	2	10	8	2	6	8	2	6	8	2
9	8	6	2	8	6	2	8	6	2	10	8	2	8	6	2	8	6	2	10	8	2	6	8	2	6	8	2
10	8	6	2	8	6	2	10	6	4	10	8	2	8	6	2	10	8	2	10	6	4	6	8	2	6	8	2
11	8	6	2	8	6	2	10	6	4	10	8	2	8	6	2	10	8	2	12	8	4	6	6	0	6	8	2
12	8	6	2	8	6	2	10	6	4	10	8	2	8	6	2	10	8	2	12	8	4	6	6	0	6	8	2
13	10	8	2	10	8	2	10	8	2	12	10	2	8	8	2	10	8	2	12	8	4	6	6	0	10	8	2
14	10	8	2	10	8	2	10	8	2	12	10	2	10	8	2	10	8	2	12	8	4	6	6	0	10	8	2
15	10	8	2	10	8	2	10	8	2	12	10	2	10	8	2	10	8	2	12	8	4	6	6	0	10	8	2
16	10	8	2	10	8	2	10	8	2	12	10	2	10	8	2	10	8	2	12	8	4	6	6	0	10	8	2
17	10	8	2	10	8	2	10	8	2	12	10	2	10	8	2	10	8	2	12	8	4	6	6	0	10	8	2
18	10	8	2	10	8	2	10	8	2	12	10	2	10	8	2	10	8	2	12	8	4	6	6	0	10	8	2
19	14	12	2	14	12	2	14	12	2	16	14	2	10	8	2	14	12	2	16	14	2	10	9	1	10	8	2
20	14	12	2	14	12	2	14	12	2	16	14	2	12	8	4	14	12	2	16	14	2	10	9	1	14	12	2
21	12	10	2	12	10	2	12	10	2	14	10	4	12	8	4	14	10	4	16	14	2	10	10	0	12	12	2
22	12	10	2	12	10	2	12	10	2	14	10	4	12	8	4	14	10	4	16	14	2	10	10	0	12	10	2
23	12	10	2	12	10	2	12	10	2	14	10	4	12	8	4	14	10	4	16	14	2	10	10	0	12	10	2
24	12	10	2	12	10	2	12	10	2	14	10	4	12	8	4	14	10	4	16	14	2	10	10	0	12	10	2
25	12	10	2	12	10	2	12	10	2	14	10	4	12	8	4	14	10	4	16	14	2	10	10	0	12	10	2
26	12	10	2	12	10	2	12	10	2	14	10	4	12	8	4	14	10	4	16	14	2	10	10	0	12	10	2
27	12	10	2	12	10	2	12	10	2	14	10	4	12	8	4	14	10	4	16	14	2	10	10	0	12	10	2
28	12	10	2	12	10	2	12	10	2	14	10	4	12	8	4	14	10	4	16	14	2	10	10	0	12	10	2
29	12	10	2	12	10	2	12	10	2	14	10	4	12	8	4	14	10	4	16	14	2	10	10	0	12	10	2
30	12	10	2	12	10	2	12	10	2	14	10	4	12	8	4	14	10	4	16	14	2	10	10	0	12	10	2
31	12	10	2	12	10	2	12	10	2	14	10	4	12	8	4	14	10	4	16	14	2	10	10	0	12	10	2
MAX																											

MONTHLY SUMMARY OF MONITORING
FOR SURFACE WATER TREATMENT REGULATIONS

System Name: Barton Flats Water System No. 3601048

Plant Name: Crypto Month/Year: May 2017

	Giardia/Crypto Final Filter																											
	Filter 1, psi			Filter 2, psi			Filter 3, psi			Filter 4, psi			Filter 5, psi			Filter 6, psi			Filter 7, psi			Filter 8, psi			Overall Gauge, psi		
Date	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff
1	6	6	0	6	8	2	4	8	4	2	6	4	6	2	4	4	6	2	6	6	0	6	6	0	6	6	0
2	6	6	0	6	8	2	4	8	4	2	6	4	6	2	4	4	6	2	6	6	0	6	6	0	6	6	0
3	6	6	0	6	8	2	4	8	4	2	6	4	6	2	4	4	6	2	6	6	0	6	6	0	6	6	0
4	6	6	0	6	8	2	4	8	4	2	6	4	6	2	4	4	6	2	6	6	0	6	6	0	6	6	0
5	6	4	2	6	6	0	4	6	2	2	4	2	6	4	2	4	6	2	6	6	0	6	6	0	6	6	0
6	6	4	2	6	6	0	4	6	2	2	4	2	6	4	2	4	6	2	6	6	0	6	6	0	6	6	0
7	6	4	2	6	6	0	4	6	2	2	4	2	6	4	2	4	6	2	6	6	0	6	6	0	6	6	0
8	6	4	2	6	6	0	4	6	2	2	4	2	6	4	2	4	6	2	6	6	0	6	6	0	6	6	0
9	6	4	2	6	6	0	4	6	2	2	4	2	6	4	2	4	6	2	6	6	0	6	6	0	6	6	0
10	6	4	2	4	6	2	2	4	2	2	4	2	4	2	2	2	4	2	4	4	0	6	6	0	4	2	2
11	4	2	2	4	6	2	2	4	2	2	4	2	4	2	2	2	4	2	4	4	0	6	6	0	4	2	2
12	4	2	2	4	6	2	2	4	2	2	4	2	4	2	2	4	4	2	4	4	2	6	6	0	4	2	2
13	6	4	2	4	6	2	2	4	2	2	4	2	4	4	0	4	4	0	4	4	0	6	6	0	4	4	0
14	4	4	0	6	6	0	2	4	2	2	4	2	4	2	2	4	4	0	4	4	0	6	6	0	4	4	0
15	4	4	0	6	6	0	2	4	2	2	4	2	4	2	2	4	4	0	4	4	0	6	6	0	4	0	0
16	4	4	0	6	6	0	2	4	2	2	4	2	4	2	2	4	4	0	4	4	0	6	6	0	4	4	0
17	4	4	0	6	6	0	2	4	2	2	4	2	4	2	2	4	4	0	4	4	0	6	6	0	4	4	0
18	4	4	0	6	6	0	2	4	2	2	4	2	4	2	2	6	6	0	6	6	0	6	6	0	4	4	0
19	4	4	2	6	6	0	4	6	-2	2	4	-2	6	2	4	6	6	0	6	6	0	6	6	0	6	6	0
20	4	4	2	6	6	0	4	6	2	2	4	2	6	2	4	6	6	0	8	6	2	8	8	0	6	6	0
21	8	6	2	8	8	0	6	6	0	4	4	0	8	6	2	6	6	0	8	6	2	8	8	0	8	8	0
22	8	6	2	8	8	0	6	6	0	4	4	0	8	6	2	6	6	0	8	6	2	8	8	0	8	8	0
23	8	6	2	8	8	0	6	6	0	4	4	0	8	6	2	6	6	0	8	6	2	8	8	0	8	8	0
24	8	6	2	8	8	0	6	6	0	4	4	0	8	6	2	6	6	0	8	6	2	8	8	0	8	8	0
25	8	6	2	8	8	0	6	6	0	4	4	0	8	6	2	6	6	0	8	6	2	8	8	0	8	8	0
26	8	6	2	8	8	0	6	6	0	4	4	0	8	6	2	6	6	0	8	6	2	8	8	0	8	8	0
27	8	6	2	8	8	0	6	6	0	4	4	0	8	6	2	6	6	0	8	6	2	8	8	0	8	8	0
28	8	6	2	8	8	0	6	6	0	4	4	0	8	6	2	6	6	0	8	6	2	8	8	0	8	8	0
29	8	7	1	8	8	0	6	6	0	4	4	0	8	6	2	6	6	0	8	6	2	8	8	0	8	8	0
30	8	7	1	8	8	0	6	6	0	4	4	0	8	6	2	6	6	0	8	6	2	8	8	0	8	8	0
31	8	7	1	8	8	0	6	6	0	4	4	0	8	6	2	6	6	0	8	6	2	8	8	0	8	8	0
MAX																											

MONTHLY SUMMARY OF MONITORING
FOR SURFACE WATER TREATMENT REGULATIONS

System Name: _____ System Number: **3601048-001**

Plant Name: **Barton Flats Water Association** Month/Year: **June-17**

	Date	Peak Raw Water Turbidity	Peak Settled Water Turbidity	Treated water turbidities every four hours (NTU)[1] Midnight to 4:00 am	4:00 am to 8:00 am	8:00 am to noon	Noon to 4:00 pm	4:00 pm to 8:00 pm	8:00 pm to Midnight	Average
Thu	1	1.9	N/A					0.28		0.28
Fri	2	1.8	N/A					0.23		0.23
Sat	3	1.6	N/A					0.21		0.21
Sun	4	1.5	N/A					0.32		0.32
Mon	5	2.3	N/A					0.27		0.27
Tue	6		N/A							-
Wed	7		N/A							-
Thu	8	0.9	N/A					0.21		0.21
Fri	9	1.6	N/A					0.25		0.25
Sat	10	0.9	N/A					0.34		0.34
Sun	11	1.3	N/A					0.21		0.21
Mon	12	1.8	N/A					0.20		0.20
Tue	13	1.8	N/A					0.24		0.24
Wed	14	1.7	N/A					0.30		0.30
Thu	15	2.5	N/A					0.26		0.26
Fri	16	1.9	N/A					0.26		0.26
Sat	17	1.3	N/A					0.23		0.23
Sun	18	1.2	N/A					0.25		0.25
Mon	19	2.1	N/A					0.28		0.28
Tue	20	2.0	N/A					0.25		0.25
Wed	21	2.7	N/A					0.29		0.29
Thu	22	1.2	N/A					0.29		0.29
Fri	23	0.8	N/A					0.24		0.24
Sat	24		N/A					0.21		0.21
Sun	25	1.4	N/A					0.22		0.22
Mon	26	2.7	N/A					0.21		0.21
Tue	27	1.7	N/A					0.23		0.23
Wed	28	2.3	N/A					0.24		0.24
Thu	29	1.2	N/A					0.30		0.30
Fri	30	1.3	N/A					0.24		0.24
Sat	31	N/A	N/A							-
	Avg.	1.7	-	-	-	-	-	0.25	-	

[1] *For continuous turbidity monitoring, a discrete turbidity value must be taken off the record chart at four hour intervals.*
Note: *See Directions on reporting peak raw and settled water turbidities.*

Total Number of Samples: **28**
% Readings <=0.2 NTU: **60.7%**
Number of readings <= 0.2 NTU: **17**
Average Effluent NTU: **0.25**
Meets Standard (i.e. More than 95% of readings are <= 0.2 NTU) (Y/N)? **NO**

Maximum discrete turbidity value: **0.34**
Average percent reduction during the month = [(Average Raw NTU - Average Effluent NTU)/(Average Raw NTU)] x 100% = **85.0%**
Meets Standard (i.e. Reduction is greater than 80%) (Y/N)? **Yes**

Percentile Results:		
xth Percentile NTU Value of all turbidity readings:	50 th =	0.25
(x% of all turbidity readings are less than these values)	90 th =	0.30
	95 th =	0.31
	98 th =	0.33
	99 th =	0.33

Incidents of turbidity greater than 0.5 NTU

Date of Incident					
Value					

Total number of incidents where turbidity is > 0.5 NTU: _____ > 1 NTU: _____

Meet Standards (I.e. NTU is not > 0.5 for more than eight consecutive hours) (Y/N): _____

After placing the filter back into service after any interruption (e.g. backwashing), did the filter effluent comply with the following criteria:

a: <= 2.0 NTU after all events (Y/N)? _____

b: <= 1.0 NTU after 90% events (Y/N)? _____

c: <= 0.2 NTU after four hours (Y/N)? _____

Indicate the date that the turbidimeters that are used for regulatory monitoring purposes were calibrated:

Date	Which Turbidimeter	Which standards used, primary or secondary	Date	Which Turbidimeter	Which standards used, primary or secondary

DISINFECTION PROCESS DATA

Disinfectant residual type (check one): ◉Free Chlorine ○Combined Chlorine ○Other

Incidents of chlorine residuals less than 0.2 ppm at the plant effluent:

Date of Incident					
Duration					
Date Dept. Notified					

Total number of incidents where residual is < 0.2 ppm: _____

Meet Standard (i.e. is not less than 0.2 ppm for more than four hours (Y/N)? _____

Number of distribution system residual samples collected:	
Number of distribution system samples for HPC only:	
Total number of residual and/or HPC samples collected:	0
Number of samples with no detectable residual and HPC is not measured:	
Number of samples with no residual and HPC > 500 CFU/mL:	
Number of samples for HPC only and HPC > 500 CFU/mL:	
Total number of samples with no residual and/or HPC > 500 CFU/mL:	0

Compute V:

Where V = [1 - (Total No. of samples with no residual and/or HPC > 500)/(Total No. of residual and/or HPC samples collected)] x 100

V = _____ -

Meets Standard (I.e. V >= 95%) (Y/N) ? _____ -

SUMMARY OF WATER QUALITY COMPLAINTS

General Complaints:

Type of Complaint	Number	Corrective Actions Taken
Taste/Odor		
Color	61	Researching BAT
Turbidity		
Suspended Solids		
Other (Describe)		

Reports of Gastrointestinal Illness (attach additional sheets if necessary):

Person Reporting	Date	Corrective Actions Taken

Attach an explanation of any failure of the performance standards or operating criteria and corrective action taken or planned.

Signature: Lee Fulmer

Date: 6/25/2017

MONTHLY SUMMARY OF MONITORING
FOR SURFACE WATER TREATMENT REGULATIONS

Information for Disinfection CT Compliance

Date	Previous Production Reading, gallons	Current production Reading, gallons	Water Produced (Current - Previous), gallons	Peak flow, gpm	pH	Temp.°C	Chlorine analyzer, mg/L
1	70773800	70815500	41700	39			2.33
2	70815500	70863600	48100	37			2.44
3	70863600	70924500	60900	38			2.34
4	70924500	70943400	18900	34			2.7
5	70943400	70989700	46300	30	7.3	45	2.24
6			0				
7			0				
8	70989700	7106600	-63883100	22.5			2.67
9	7106600	71109800	64003200	23.6			2.41
10	71109800	71129900	20100	22.5			2.51
11	71129900	71160600	30700	33			1.77
12	71160600	71212200	51600	38			1.85
13	71212200	71246600	34400	43			2.45
14	71246600	71309200	62600	44			1.9
15	71309200	71360800	51600	45	7.3	42	2.14
16	71360800	71416700	55900	43			2.28
17	71416700	71477000	60300	22			2.17
18	71477000	71499700	22700	20			2.21
19	71499700	71515300	15600	54.9	7.2	45	2.05
20	71515300	71573100	57800	47.7			2.21
21	71573100	71647900	74800	52.2			2.38
22	71647900	71700800	52900	44			1.54
23	71700800	71775400	74600	42			2.04
24	71775400	7182100	-64593300	41			2.05
25	7182100	71900700	64718600	37			2.21
26	71900700	71926700	26000	50			2.06
27	71926700	71985300	58600	62.8			2.03
28	71985300	72089900	104600	51	2.2	46	2.24
29	72089900	72130500	40600	37			2.42
30	72130500	72191800	61300	40			2.65
31	NA		#VALUE!				
AVG	NA	NA	#VALUE!	39.07857	6	44.5	2.224643
Max	NA	NA	#VALUE!	62.8	7.3	46	2.7
Min	NA	NA	#VALUE!	20	2.2	42	1.54
Total	NA	NA	#VALUE!	NA	NA	NA	NA

MONTHLY SUMMARY OF MONITORING
FOR SURFACE WATER TREATMENT REGULATIONS

System Name: _____ System No. 3601048

Plant Name: Barton Flats Water Month/Year: Jun-17

	Giardia/Crypto Pre Filter																											
	Filter 1, psi			Filter 2, psi			Filter 3, psi			Filter 4, psi			Filter 5, psi			Filter 6, psi			Filter 7, psi			Filter 8, psi			Overall Gauge, psi		
Date	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff
1	10	10	0	10	10	0	10	12	2	10	12	2	10	10	0	10	12	2	14	12	2	12	10	2	12	10	2
2	10	10	0	10	10	0	10	12	2	10	12	2	10	10	0	10	12	2	14	12	2	12	10	2	12	10	2
3	10	10	0	10	10	0	10	12	2	10	12	2	10	10	0	10	12	2	14	12	2	12	10	2	12	10	2
4	10	10	0	10	10	0	10	12	2	10	12	2	10	10	0	10	12	2	14	12	2	12	10	2	12	10	2
5	10	10	0	10	10	0	10	12	2	10	12	2	10	10	0	10	12	2	14	12	2	12	10	2	12	10	2
6																											
7																											
8	6	6	0	6	6	0	10	12	2	10	12	2	10	10	0	10	8	2	14	12	2	10	6	4	12	10	2
9	6	6	0	6	6	0	10	12	2	10	12	0	10	10	0	10	8	2	14	12	2	10	6	4	12	10	2
10	10	10	0	10	8	2	10	12	2	12	10	2	10	10	0	12	10	2	14	10	4	11	6	5	12	10	2
11	10	10	0	10	8	2	10	12	2	12	10	2	10	10	0	12	10	2	14	10	4	6	11	5	12	10	2
12	10	8	2	10	8	2	12	10	2	12	10	2	10	10	0	12	10	2	14	10	4	12	8	4	14	8	4
13	14	10	4	12	10	2	12	10	2	12	10	2	10	10	0	12	10	2	14	10	4	12	8	4	12	8	4
14	16	12	4	14	10	4	16	14	2	18	16	2	14	12	2	16	14	2	18	14	4	14	10	4	14	10	4
15	16	12	4	14	10	4	16	14	2	18	16	2	14	12	2	16	14	2	18	14	4	14	10	4	14	10	4
16	16	12	4	14	10	4	16	14	2	18	16	2	14	12	2	16	14	2	18	14	4	14	10	4	14	10	4
17	8	4	4	6	4	2	8	6	2	10	8	2	8	6	2	8	6	2	12	8	4	6	4	2	6	4	2
18	8	4	4	6	4	2	8	6	2	10	8	2	8	6	2	8	6	2	12	8	4	6	4	2	6	4	2
19	20	16	4	20	16	4	20	18	2	22	18	4	20	16	4	22	18	4	26	18	8	16	16	0	20	18	2
20	20	16	4	20	16	4	20	18	2	22	18	4	20	16	4	22	18	4	26	18	8	16	16	0	20	18	2
21	20	16	4	20	16	4	20	18	2	22	18	4	20	16	4	22	18	4	26	18	8	16	16	0	20	18	2
22	18	10	8	16	10	6	18	12	6	20	12	8	16	10	6	18	12	6	20	12	8	12	12	0	18	12	6
23	18	10	8	16	10	6	18	12	6	20	12	8	16	10	6	18	12	6	20	12	8	12	12	0	18	12	6
24	18	10	8	16	8	8	18	12	6	20	12	8	16	10	6	18	12	6	20	10	10	14	12	2	18	12	6
25	16	10	6	14	8	6	16	12	4	18	12	6	16	10	6	16	12	4	20	12	8	12	12	0	16	12	4
26	18	10	8	16	8	8	18	12	6	20	12	8	16	10	6	18	12	6	20	10	10	14	12	2	18	12	6
27	18	10	8	16	8	8	18	12	6	20	12	8	16	12	6	18	12	6	20	10	10	14	12	2	18	12	6
28	10	10	0	16	8	8	18	12	6	20	12	8	16	12	6	18	12	6	20	10	10	14	12	2	18	12	6
29	10	10	0	16	8	8	18	12	6	20	12	8	16	12	6	18	12	6	20	10	10	14	12	2	18	12	6
30	10	10	0	16	8	8	18	12	6	20	12	8	16	12	6	18	12	6	20	10	10	14	12	2	18	12	6
31																											
MAX																											

MONTHLY SUMMARY OF MONITORING
FOR SURFACE WATER TREATMENT REGULATIONS

System Name: _____ System No. 3601048

Plant Name: Barton Flats Water Month/Year: Jun-17

	Giardia/Crypto Final Filter																										
	Filter 1, psi			Filter 2, psi			Filter 3, psi			Filter 4, psi			Filter 5, psi			Filter 6, psi			Filter 7, psi			Filter 8, psi			Overall Gauge, psi		
Date	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff
1	10	6	4	10	8	2	8	8	0	6	6	0	10	6	4	8	8	0	10	8	2	10	10	0	8	8	0
2	10	6	4	10	8	2	8	8	0	6	6	0	10	6	4	8	8	0	10	8	2	10	10	0	8	8	0
3	10	6	4	10	8	2	8	8	0	6	6	0	10	6	4	8	8	0	10	8	2	10	10	0	8	8	0
4	10	6	4	10	8	2	8	8	0	6	6	0	10	6	4	8	8	0	10	8	2	10	10	0	8	8	0
5	10	6	4	10	8	2	8	8	0	6	6	0	10	6	4	8	8	0	10	8	2	10	10	0	8	8	0
6																											
7																											
8	8	6	2	8	6	2	8	4	4	6	2	4	6	4	2	6	4	2	6	8	2	8	6	2	8	6	2
9	8	6	2	8	6	2	8	4	4	6	2	4	6	2	4	6	2	4	6	8	2	8	6	2	8	6	2
10	10	8	2	10	8	2	10	6	4	8	4	4	8	6	2	10	6	4	10	8	2	10	8	2	10	8	2
11	10	8	2	10	8	2	10	6	4	8	4	4	8	6	2	10	6	4	10	8	2	10	8	2	10	8	2
12	10	8	2	10	8	2	10	6	4	8	4	4	8	6	2	10	6	4	10	8	2	10	8	2	10	8	2
13	11	8	3	12	10	2	12	9	3	12	6	4	12	10	2	12	8	4	12	10	2	12	10	2	12	10	2
14	12	10	2	12	10	2	12	8	4	10	8	2	12	10	2	10	8	2	12	10	2	12	10	2	12	10	2
15	12	10	2	12	10	2	12	8	4	10	8	2	12	10	2	10	8	2	12	10	2	12	10	2	12	10	2
16	4	2	2	6	4	2	4	2	2	2	2	0	4	2	2	4	2	2	4	4	0	6	4	2	4	2	2
17	4	2	2	6	4	2	4	2	2	2	2	0	4	4	2	4	4	2	4	4	0	6	4	2	4	2	2
18	4	2	2	6	4	2	4	2	2	2	2	0	4	2	2	4	2	2	4	4	0	6	4	2	4	2	2
19	14	12	2	16	14	2	14	10	4	12	8	4	14	10	4	14	12	2	16	12	4	16	16	0	16	14	2
20	14	12	2	16	14	2	14	10	4	12	8	4	14	10	4	14	12	2	16	12	4	16	16	0	16	14	2
21	14	12	2	16	14	2	14	10	4	12	8	4	14	10	4	14	12	2	16	12	4	16	16	0	16	14	2
22	10	8	2	10	10	0	10	8	2	8	4	4	10	6	4	8	6	2	10	8	2	10	10	0	10	8	2
23	10	8	2	10	10	0	10	8	2	8	4	4	10	8	4	8	6	2	10	8	2	10	10	0	10	8	2
24	10	4	6	8	8	0	10	6	4	4	4	0	8	4	4	6	6	0	10	6	4	10	8	2	8	4	4
25	10	4	6	8	8	0	6	6	0	4	4	0	10	4	6	6	6	0	10	6	4	10	8	2	8	4	4
26	10	4	6	8	8	0	6	6	0	4	4	0	10	4	6	6	6	0	10	6	4	10	8	2	8	4	4
27	16	6	10	16	10	6	16	16	6	12	6	6	16	6	10	14	8	6	18	6	12	16	10	6	16	10	6
28	16	6	10	16	10	6	16	10	6	12	6	6	16	6	10	14	8	6	18	6	12	16	10	6	16	10	6
29	16	6	10	16	10	6	16	10	6	12	6	6	16	6	10	14	8	6	18	6	12	16	10	6	16	10	6
30	16	6	10	16	10	6	16	10	6	12	6	6	16	6	10	14	8	6	18	6	12	16	10	6	16	10	6
31																											
MAX																											

MONTHLY SUMMARY OF MONITORING
FOR SURFACE WATER TREATMENT REGULATIONS

System Name: **Barton Flats Water System** System Number: **3601048**

Plant Name: Month/Year: **July-17**

	Date	Peak Raw Water Turbidity	Peak Settled Water Turbidity	Treated water turbidities every four hours (NTU)[1] Midnight to 4:00 am	4:00 am to 8:00 am	8:00 am to noon	Noon to 4:00 pm	4:00 pm to 8:00 pm	8:00 pm to Midnight	Average
Sat	1	1.2	N/A					0.30		0.30
Sun	2	1.5	N/A					0.25		0.25
Mon	3	2.3	N/A					0.24		0.24
Tue	4	1.2	N/A					0.28		0.28
Wed	5	2.5	N/A					0.23		0.23
Thu	6	1.9	N/A					0.25		0.25
Fri	7	1.0	N/A					0.26		0.26
Sat	8	2.5	N/A					0.24		0.24
Sun	9	2.5	N/A					0.38		0.38
Mon	10	3.2	N/A					0.23		0.23
Tue	11	2.1	N/A					0.22		0.22
Wed	12	2.3	N/A					0.30		0.30
Thu	13	1.4	N/A					0.26		0.26
Fri	14	1.4	N/A					0.29		0.29
Sat	15	1.3	N/A					0.29		0.29
Sun	16	1.3	N/A					0.28		0.28
Mon	17	1.3	N/A					0.29		0.29
Tue	18	1.3	N/A					0.29		0.29
Wed	19	1.8	N/A					0.26		0.26
Thu	20	1.9	N/A					0.26		0.26
Fri	21		N/A							-
Sat	22	1.1	N/A					0.24		0.24
Sun	23	1.2	N/A					0.21		0.21
Mon	24	1.3	N/A					0.20		0.20
Tue	25	1.7	N/A					0.23		0.23
Wed	26	2.2	N/A					0.26		0.26
Thu	27	2.1	N/A					0.26		0.26
Fri	28	2.0	N/A					0.27		0.27
Sat	29	1.8	N/A					0.26		0.26
Sun	30	1.7	N/A					0.24		0.24
Mon	31	2.2	N/A					0.28		0.28
	Avg.	1.8	-	-	-	-	-	0.26	-	

[1] *For continuous turbidity monitoring, a discrete turbidity value must be taken off the record chart at four hour intervals.*
***Note:** See Directions on reporting peak raw and settled water turbidities.*

Total Number of Samples: **30**
% Readings <=0.2 NTU: **40.0%**

Number of readings <= 0.2 NTU: **12**
Average Effluent NTU: **0.26**
Meets Standard (i.e. More than 95% of readings are <= 0.2 NTU) (Y/N)? **NO**

Maximum discrete turbidity value: **0.38**
Average percent reduction during the month = [(Average Raw NTU - Average Effluent NTU)/(Average Raw NTU)] x 100% = **85.2%**
Meets Standard (i.e. Reduction is greater than 80%) (Y/N)? **Yes**

Percentile Results:		
xth Percentile NTU Value of all turbidity readings:	50 th =	0.26
(x% of all turbidity readings are less than these values)	90 th =	0.29
	95 th =	0.30
	98 th =	0.33
	99 th =	0.36

Incidents of turbidity greater than 0.5 NTU

Date of Incident					
Value					

Total number of incidents where turbidity is > 0.5 NTU: _____ > 1 NTU: _____

Meet Standards (I.e. NTU is not > 0.5 for more than eight consecutive hours) (Y/N): _____

After placing the filter back into service after any interruption (e.g. backwashing), did the filter effluent comply with the following criteria:

a: <= 2.0 NTU after all events (Y/N)? _____
b: <= 1.0 NTU after 90% events (Y/N)? _____
c: <= 0.2 NTU after four hours (Y/N)? _____

Indicate the date that the turbidimeters that are used for regulatory monitoring purposes were calibrated:

Date	Which Turbidimeter	Which standards used, primary or secondary	Date	Which Turbidimeter	Which standards used, primary or secondary

DISINFECTION PROCESS DATA

Disinfectant residual type (check one):
- (●) Free Chlorine
- ( ) Combined Chlorine
- ( ) Other

Incidents of chlorine residuals less than 0.2 ppm at the plant effluent:

Date of Incident					
Duration					
Date Dept. Notified					

Total number of incidents where residual is < 0.2 ppm: _____

Meet Standard (i.e. is not less than 0.2 ppm for more than four hours (Y/N)? _____

Number of distribution system residual samples collected:	
Number of distribution system samples for HPC only:	
Total number of residual and/or HPC samples collected:	0
Number of samples with no detectable residual and HPC is not measured:	
Number of samples with no residual and HPC > 500 CFU/mL:	
Number of samples for HPC only and HPC > 500 CFU/mL:	
Total number of samples with no residual and/or HPC > 500 CFU/mL:	0

Compute V:

Where V = [1 - (Total No. of samples with no residual and/or HPC > 500)/(Total No. of residual and/or HPC samples collected)] x 100

V = _____ - _____

Meets Standard (I.e. V >= 95%) (Y/N) ? _____ - _____

SUMMARY OF WATER QUALITY COMPLAINTS

General Complaints:

Type of Complaint	Number	Corrective Actions Taken
Taste/Odor		
Color	6	researching BAT
Turbidity		
Suspended Solids		
Other (Describe)		

Reports of Gastrointestinal Illness (attach additional sheets if necessary):

Person Reporting	Date	Corrective Actions Taken

Attach an explanation of any failure of the performance standards or operating criteria and corrective action taken or planned.

Signature: _____

Date: _____

MONTHLY SUMMARY OF MONITORING
FOR SURFACE WATER TREATMENT REGULATIONS

Information for Disinfection CT Compliance

Date	Previous Production Reading, gallons	Current production Reading, gallons	Water Produced (Current - Previous), gallons	Peak flow, gpm	pH	Temp.°C	Chlorine analyzer, mg/L
1	72171800	72199400	27600	40	7.3	50	2.03
2	72199400	72269700	70300	38			2.45
3	72269700	72292600	22900	42			2.01
4	72292600	72334600	42000	45.2	7.3	48	2.14
5	72334600	72385700	51100	47			2.03
6	72385700	72421800	36100	37			2.14
7	72421800	72472300	50500	31			2.03
8	72472300	72519000	46700	39			2.17
9	72519000	72563500	44500	35			2.01
10	72563500	72590000	26500	56.4			2.59
11	72590000	72645700	55700	48			2.71
12	72645700	72703300	57600	47			2.2
13	72703300	72729800	26500	42.7			1.48
14	72729800	72777300	47500	45			1.15
15	72777300	72858900	81600	40			2.11
16	72858900	72895000	36100	42			2.58
17	72895000	72934000	39000	39			2.03
18	72934000	72988600	54600	50			2.33
19	72988600	73053000	64400	47			2.25
20	73053000	73115700	62700	47			2.04
21			0				
22	73115700	73226300	110600	40			2.01
23	73226300	73277000	50700	38			2.04
24	73277000	73316800	39800	45			2.14
25	73316800	73367500	50700	42.7			2.24
26	73367500	73406500	39000	45	7.2	50	2.22
27	73406500	73491100	84600	43			2.02
28	73491100	73540700	49600	43			2.14
29	73540700	73592500	51800	41			2.05
30	73592500	73647600	55100	38			2.13
31	73647600	73685700	38100	59			2.12
AVG	NA	NA	48835.484	43.1	7.266667	49.33333	2.119667
Max	NA	NA	110600	59	7.3	50	2.71
Min	NA	NA	0	31	7.2	48	1.15
Total	NA	NA	1513900	NA	NA	NA	NA

MONTHLY SUMMARY OF MONITORING
FOR SURFACE WATER TREATMENT REGULATIONS

System Name: Barton flats water System No. 3601048

Plant Name: giardia Month/Year: Jul-17

	Giardia/Crypto Pre Filter																										
	Filter 1, psi			Filter 2, psi			Filter 3, psi			Filter 4, psi			Filter 5, psi			Filter 6, psi			Filter 7, psi			Filter 8, psi			Overall Gauge, psi		
Date	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff
1	16	10	6	16	8	8	18	12	6	20	12	8	16	10	6	18	12	6	20	10	10	14	12	2	18	12	6
2	16	10	6	16	8	8	18	12	6	20	12	8	16	10	6	18	12	6	20	10	10	14	12	2	18	12	6
1	16	10	6	16	8	8	18	12	6	20	12	8	16	10	6	18	12	6	20	10	10	14	12	2	18	12	6
4	15	10	5	12	6	6	16	10	6	18	10	8	15	10	5	15	10	5	18	10	8	12	10	2	15	10	5
5	15	10	5	12	6	6	16	10	6	18	10	8	15	10	5	15	10	5	18	10	8	12	10	2	15	10	5
6	15	10	5	12	6	6	16	10	6	18	10	8	15	10	5	15	10	5	18	10	8	12	10	2	15	10	5
7	14	9	5	10	4	6	14	8	6	16	8	8	14	8	6	14	8	6	16	8	8	10	8	2	14	8	6
8	16	10	6	16	8	8	18	12	6	20	12	8	16	10	6	18	12	6	20	10	10	14	12	2	18	12	6
9	15	8	7	12	6	8	16	10	6	18	10	8	15	9	6	16	10	6	18	10	8	12	10	2	16	10	6
10	22	15	7	22	14	8	24	17	7	26	18	8	22	16	6	22	16	6	26	16	10	20	17	3	24	18	6
11	18	12	8	18	10	8	18	12	6	22	14	8	19	12	7	18	12	6	22	12	10	16	13	3	20	14	6
12	18	12	8	18	10	8	18	12	6	22	14	8	19	12	7	18	12	6	22	12	10	16	13	3	20	14	6
13																											
14																											
15	16	8	8	16	8	8	18	10	8	20	11	9	16	9	7	18	12	6	20	10	10	14	10	4	18	11	7
16	16	8	8	16	8	8	18	10	8	20	11	9	18	9	9	18	12	6	22	12	10	16	10	6	18	11	7
17	16	8	8	16	8	8	18	10	8	20	11	9	18	9	9	18	12	6	22	12	10	16	10	6	18	11	7
18	18	8	10	16	8	8	18	10	8	20	11	9	18	9	9	18	12	6	22	12	10	16	10	6	18	11	7
19	18	8	10	16	8	8	18	10	8	20	11	9	18	9	9	18	12	6	22	12	10	16	10	6	18	11	7
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22	18	8	10	16	8	8	18	10	8	20	11	9	18	9	9	18	12	6	22	12	10	16	10	6	18	11	7
23	18	8	10	16	8	8	18	10	8	20	11	9	18	9	9	18	12	6	22	12	10	16	10	6	18	11	7
24	18	8	10	18	8	10	18	10	8	20	10	10	18	9	9	18	10	8	22	12	10	18	10	8	18	10	8
25	18	8	10	18	8	10	18	10	8	20	10	10	18	9	9	18	10	8	22	12	10	18	10	8	18	10	8
26	18	8	10	18	8	10	18	10	8	20	10	10	18	9	9	18	10	8	22	12	10	18	10	8	18	10	8
27	18	8	10	18	8	10	18	10	8	20	10	10	18	9	9	18	10	8	22	13	11	18	10	8	18	10	8
28	18	8	10	18	8	10	18	10	8	20	10	10	18	9	9	18	10	8	22	13	11	18	10	8	18	10	8
29	18	8	10	18	8	10	18	10	8	20	10	10	18	9	9	18	10	8	22	13	11	18	10	8	18	10	8
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31	18	8	10	19	8	11	20	10	10	20	9	11	20	10	10	20	10	10	22	13	11	20	10	10	20	10	10
MAX	18	8	10	19	8	11	20	10	10	20	9	11	20	10	10	20	10	10	22	13	11	20	10	10	20	10	10

MONTHLY SUMMARY OF MONITORING
FOR SURFACE WATER TREATMENT REGULATIONS

System Name: Barton flats water System No. 3601048

Plant Name: _____ Month/Year: July, 2017

	Giardia/Crypto Final Filter																											
	Filter 1, psi			Filter 2, psi			Filter 3, psi			Filter 4, psi			Filter 5, psi			Filter 6, psi			Filter 7, psi			Filter 8, psi			Overall Gauge, psi		
Date	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff	Inlet	Out	Diff
1	16	10	6	16	10	6	16	10	6	12	6	6	16	6	10	14	8	6	18	6	12	16	10	6	16	10	6
2	16	10	6	16	10	6	16	10	6	12	6	6	16	6	10	14	8	6	18	6	12	16	10	6	16	10	6
3	16	10	6	16	10	6	16	10	6	12	6	6	16	6	10	14	8	6	18	6	12	16	10	6	16	10	6
4	16	10	6	16	10	6	16	10	6	12	6	6	16	6	10	14	8	6	18	6	12	16	10	6	16	10	6
5	16	10	6	16	10	6	16	10	6	12	6	6	16	6	10	14	8	6	18	6	12	16	10	6	16	10	6
6	16	10	6	16	10	6	16	10	6	12	6	6	16	6	10	14	8	6	18	6	12	16	10	6	16	10	6
7	16	10	6	16	10	6	16	10	6	12	6	6	16	6	10	14	8	6	18	6	12	16	10	6	16	10	6
8	16	10	6	16	10	6	16	10	6	12	6	6	16	6	10	14	8	6	18	6	12	16	10	6	16	10	6
9	16	10	6	16	10	6	16	10	6	12	6	6	16	6	10	14	8	6	18	6	12	16	10	6	16	10	6
10	16	10	6	16	10	6	16	10	6	12	6	6	16	6	10	14	8	6	18	6	12	16	10	6	16	10	6
11	16	10	6	16	10	6	16	10	6	12	6	6	16	6	10	14	8	6	18	6	12	16	10	6	16	10	6
12	16	10	6	16	10	6	16	10	6	12	6	6	16	6	10	14	8	6	18	6	12	16	10	6	16	10	6
13																											
14																											
15	18	10	8	18	10	8	18	10	8	14	6	8	16	6	10	16	8	8	18	6	12	18	10	8	18	10	8
16	18	10	8	18	10	8	18	10	8	14	6	8	16	6	10	16	8	8	18	6	12	18	10	8	18	10	8
17	18	10	8	18	10	8	18	10	8	14	6	8	16	6	10	16	8	8	18	6	12	18	10	8	18	10	8
18	18	10	8	18	10	8	18	10	8	14	6	8	16	6	10	16	8	8	18	6	12	18	10	8	18	10	8
19	18	10	8	18	10	8	18	10	8	14	6	8	16	6	10	16	8	8	18	6	12	18	10	8	18	10	8
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21	18	10	8	18	10	8	18	10	8	14	6	8	16	6	10	16	8	8	18	6	12	18	10	8	18	10	8
22	18	10	8	18	10	8	18	10	8	14	6	8	16	6	10	16	8	8	18	6	12	18	10	8	18	10	8
23	18	10	8	18	10	8	18	10	8	14	6	8	16	6	10	16	8	8	18	6	12	18	10	8	18	10	8
24	18	10	8	18	10	8	18	10	8	14	6	8	16	6	10	16	8	8	18	6	12	18	10	8	18	10	8
25	18	10	8	18	10	8	18	10	8	14	6	8	16	6	10	16	8	8	18	6	12	18	10	8	18	10	8
26	18	10	8	18	10	8	18	10	8	14	6	8	16	6	10	16	8	8	18	6	12	18	10	8	18	10	8
27	18	10	8	18	10	8	18	10	8	14	6	8	16	6	10	16	8	8	18	6	12	18	10	8	18	10	8
28	18	10	8	18	10	8	18	10	8	14	6	8	16	6	10	16	8	8	18	6	12	18	10	8	18	10	8
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30	18	10	8	18	10	8	18	10	8	14	6	8	16	6	10	16	8	8	18	6	12	18	10	8	18	10	8
31	18	10	8	18	10	8	18	10	8	14	6	8	16	6	10	16	8	8	18	6	12	18	10	8	18	10	8
MAX	18	10	8	18	10	8	18	10	8	14	6	8	16	6	10	16	8	8	18	6	12	18	10	8	18	10	8